

A Review On Hybrid Routing Protocols In Manet

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Abstract - Routing in Mobile Ad-hoc Networks is a widely researched area in the recent years. Many researchers have proposed various techniques for efficiently route the data from source to destination and compared their approach with the already existing approaches. The hybrid routing takes the advantage of both proactive and reactive routing protocols. Firstly in every protocol the initial route is selected reactively and the information is stored proactively. The memory is required with every node to proactively store the information of the route. In this paper a survey on various routing protocols is presented and compared on the basis of various performance parameters.

Keywords - MANET, Hybrid

I. INTRODUCTION

A mobile ad hoc network (MANET) is a constantly self-configuring, infrastructure-less network of mobile nodes connected without wires. Each mobile node in a MANET is independent to move freely in any direction, and will therefore modify its links to other devices repeatedly. Each node must forward data not related to its own use. The primary challenge in building a MANET is equipping each device to continuously maintain the information required to properly route traffic. Such networks may operate by themselves or may be connected to the larger Internet. They may have one or numerous and dissimilar transceivers between nodes. This results in a highly dynamic, autonomous topology. Distributed systems nowadays are everywhere and facilitate many applications like Client-Server systems, transaction processing, World Wide Web and many more. The huge computing possibility of these systems is often hindered by their exposure to failures. Therefore a number of techniques have been proposed till today to increase reliability and decrease failures which include group communications, transactions, and rollback recovery. Rollback recovery treats a distributed system as a group of processes that communicate through a wireless network. These processes have access to a steady storage area that survives various types of failures. These processes can tolerate failure by saving their recovery information on these storage devices. If failure occurs than these processes recover by using this saved information from these devices. This recovery information contains at least the states of these processes called *check points*. Other recovery protocols other than rollback recovery also require other additional information. Rollback recovery can have different essence like it may require an application to decide when and what to save or it may provide all the information itself to construct an application.

II. LITERATURE SURVEY

Zone Routing Protocol (ZRP) has the first hybrid protocol proposed in literature which employs both table driven and source initiated protocols. It defined the zone of each node that consists of k neighborhood. Routing zone can be performed with the use of proactive routing protocol and routing between nodes in distinct zones can be performed by the on-demand routing protocol. The ability to compute and store, as well as the instability of the wireless communication medium result in topology changes fast and unpredictable.

Another routing protocol (ZHLS) is proposed which divides network into the non-overlapping zones that based on the physical location information. Alberto Gordillo Muñoz et al. proposed Multicast over vehicle adhoc networks. In this work, several approaches are categorized and compared which provides its merits and demerits to give better result for multicast over vehicle adhoc network.

HARP, relied on Distributed Dynamic Routing protocol to decompose the network into their zones. HARP may a hybrid protocol that separates the network into several zones. A number of forward nodes in every zone can responsible to communicate the nodes in their zones. HARP can used own custom protocol for the inter-zone routing, whose goal can reduce the delays via early path maintenance. While HARP can create the zones of varied sizes, it contains no control over zones and doesn't adjust dynamically their sizes.

SHARP can be utilized the protocol which is used to perform the routing. Every SHARP node can be determined network neighborhood. In this, FSR, Fisheye State Routing, may link-state protocol which exchanged the periodic link-state information. This period of link state propagation can be determined by one distance to other destination. ADV may be algorithm which defines the demand of characteristics to vary the frequency and size of the routing updates. Some researchers can be examined the protocols with their timer-directed route.

Neng-Chung Wanget al. presented a greedy location-aided routing protocol for mobile ad hoc networks. In this work, GLAR approach is used in order to improve efficiency of LAR in mobile networks. In this protocol, initially baseline is decided. Thus, it can be easy to find better routing path with this GLAR protocol.

Savage.S et al explored the operation of TCP congestion control when for misbehaving receiver. There are simple attacks like ACK division, DupACK spoofing ,optimistic ACK that allow the receiver to drive a standard TCP sender arbitrary fast without losing end to end reliability. They describe backwards-compatible mechanisms that can be implemented at sender to mitigate the effects of misbehaving receivers and describe the working of a new cumulative nonce approach that modified TCP design without changing the nature of congestion control function to eliminate these vulnerabilities.

Chakeres. I. D et al proposed a Perceptive admission control protocol for wireless networks with acceptable quality of service. Once the amount of available bandwidth is determined; nodes can adapt their data traffic to keep the channel from becoming congested. They have shown that the time at the wireless channel is sensed as busy is a good estimator of available bandwidth.

Rakocevic. V focused on two important issues related to congestion. According to the work the multimedia application requires a fresh vision towards the congestion control. The work is more focused on providing the fresh approach towards multimedia applications in wireless sensor networks.

III. CONCLUSION

Routing in MANET is an important issue of concern in recent years. Many routing protocols have been proposed in recent years and their merits and demerits are compared on the basis of various performance parameters. Some work on zones to provide the connectivity between the source and the destination while others make a distributed network and store the information temporarily in the network.

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