Abstract

In Mobile Ad-hoc networks, without any fixed access point the mobile nodes are formed randomly. The congestion may increase while the network traffic increases due to the dynamic topology of nodes and limited capacity of memory. In Ad-hoc networks, the congestion is an important issue because it will lead to loss of packet, long delay and overhead of packets and so the performance of Ad-hoc networks also reduces. The congestion control is based on controlling the traffic in which too many packets exist in the part of the subnet. This manuscript proposes the Enhanced Clusterhead Gateway Switch Routing Protocol (ECGSR) with the basis of Ad-hoc On-demand Distance Vector Routing (AODV) based mechanism for congestion control. In this process, the cluster head plays the main role in monitoring the congestion in Ad-hoc networks, by reducing the number of transmissions and by creating the routes on need. This proposed scheme is to reduce the loss of packets, routing overhead and end-to-end delay during the data packet transmission. So it accomplishes the throughput, better packet delivery ratio, low end-to-end delay and overhead by reducing the congestion in Ad-hoc networks using the chosen ECGSR protocol based on AODV basis. The ECGSR is well-organized to control
the congestion than the Clusterhead Gateway Switch Routing Protocol (CGSR) with the basis of Destination Sequence Distance Vector (DSDV).

References


Volume 3, Issue 8, August 2013.

Index Terms

Computer Science Networks

Keywords

ECGSR (Enhanced Clusterhead Gateway Switch Routing Protocol), Congestion control, MANET (Mobile Ad-hoc Networks), Cluster head, AODV (Ad-hoc On-demand Distance Vector Routing), DSDV (Destination Sequence Distance Vector), TCL (Tool Command Language).