Abstract

Mobile Ad-hoc networks (MANETs) are formed by the association of the mobile devices, usually capable of multi-hop communication among themselves even if there is no networking infrastructure and central administration to control its operation. Need for the ubiquitous computing lead to connect the MANETs to the fixed IP Network i.e. internet. To connect the MANET to the internet first it might discover internet gateway through which it can communicate. The discovered gateway may be the mobile node within the MANET or it may be any fixed external node outside the MANET. The gateway works as the default router for all the nodes of the MANET through which all the incoming/outgoing packets are routed between the MANET and the internet. Discovery of the efficient internet gateway is very challenging task. Although so many solutions are proposed and implemented by the different authors/researchers but still no unique and robust solution is discovered so far, therefore a deep investigation and evaluation of the existing proposal is required to investigate the robust & flexible solution. This paper discusses the fundamentals of MANET-INTERNET integration and address systematic evaluation of the current proposals with issues & challenges remains unresolved. The aim of this paper is to build the strong foundation to discover an efficient, robust and flexible internet access solution that has not been discovered so far. This review paper concludes with further points of investigation.
Review Techniques and Fundamentals of Internet Access Solutions: MANET-INTERNET Integration Scenario

References

- Kumar Rakesh, Anil Kumar Surje and Manoj Mishra, “A Proactive Load-Aware Gateway Discovery in Ad Hoc Networks for Internet Connectivity”, International Journal of Computer Networks & Communications (IJCNC) Vol. 2, No. 5, September 2010
- Skloul Ibrahim, Dr. Peter J. B. King and Prof. Robert Pooley, “Performance Comparison of CBR in MDVZRP with DSDV and AODV”, Computer Networking: A Top down Approach Featuring the Internet.
- Network Working Group; IETF RFC 1058. txt? number=1058
- Network Working Group; IETF RFC 1247. txt
- Network Working Group; IETF RFC 1105. txt? number=1105

2 / 5
- Shiv Mehra and Chansu Yu. “Survey on Techniques Providing Internet Connectivity to Mobile Ad hoc Networks”; 
- Jaewook Shin, Haeryong Lee, Jeehyeon Na, Aesoon Park and Sangha Kim “Gateway Discovery and Routing in Ad Hoc Networks with NAT-based Internet Connectivity”; 0-7803-8521-7/04/$20.00 © 2004 IEEE.
- Mari Carmen Domingo and Rui Prior “An Adaptive Gateway Discovery Algorithm to support QoS when providing Internet Access to Mobile Ad Hoc Networks”; JOURNAL
OF NETWORKS, VOL. 2, NO. 2, APRIL 2007.


- ZHUANG Lin, LIU Yuan-an, LIU Kai-ming, ZHAI Lin-bo and YANG Ming &quot;An adaptive algorithm for connecting mobile ad hoc network to Internet with unidirectional links supported&quot; Elsevier journal of The Journal of China Universities of Posts and Telecommunications-2010


Index Terms

Computer Science Mobile Networks

Keywords

MANET AODV TTL FA Gateway Discovery Internet Routing Protocols