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Performance analysis of HRO-B+ scheme for the nested mobile networks using OPNet (Article)

Senan, S., Hashim, A.H.A.

Department of Electrical and Computer Information, Faculty of Engineering, International Islamic University Malaysia, Kuala Lumpur, Malaysia

Abstract

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As a demand of accessing Internet is increasing dramatically, host mobility becomes insufficient to fulfill these requirements. However, to overcome this limitation, network mobility has been introduced. One of its implementation is NEMO Basic Support protocol which is proposed by Internet Engineering Task Force (IETF). In NEMO, one or more Mobile Router(s) manages the mobility of the network in a way that its nodes would be unaware of their movement. Although, it provides several advantages, it lacks many drawbacks in term of route optimization especially when multiple nested mobile networks are formed. This paper presents a new hierarchical route optimization scheme for nested mobile networks using Advanced Binding Update List (BUL+), which is called HRO-B+. From performance evaluation, it shows that this scheme performs better in terms of throughput, delay, response time, and traffic, and achieves optimal routing. © 2017 Institute of Advanced Engineering and Science. All rights reserved.

Author keywords

[Mobile IPv6](#)
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- 1 Yang, Y., Wang, X., Sun, Q., Wang, D.

A route optimisation scheme for 6LoWPAN nested mobile networks

(2016) *International Journal of Mobile Network Design and Innovation*, 6 (3), pp. 131-141.

<http://www.inderscience.com/browse/index.php?journalID=154>

doi: 10.1504/IJMNDI.2016.078979

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- 2 Senan, S., Hashim, A.H.A.

Hierarchical Route Optimization Scheme Using Advanced Binding Update List (BUL+) for Nested Mobile Networks (2017) *International Journal of Future Generation Communication and Networking*, 10 (2), pp. 55-64.

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