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Lecture Notes in Electrical Engineering

Volume 344, 2015, Pages 77-85

1st Applied Electromagnetic International Conference, APPEIC 2014; Bandung; Indonesia; 16 December 2014 through 18 December 2014; Code 142609

A numerical study on MM-NEMO scheme: Impact of rising number of mobile routers and cell residence time (Conference Paper)

 Islam, S.^a [✉](#), Hashim, A.H.A.^a [✉](#), Habaebi, M.H.^a [✉](#), Hassan, W.H.^a [✉](#), Latif, S.A.^a [✉](#), Hasan, M.K.^b [✉](#), Ramli, H.A.M.^{ab} [✉](#) [👤](#)
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Abstract

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Signaling overhead is a significant issue for mobile network due to increase traffic load with packet loss and delay during frequent movement of Mobile Router (MR) from one subnet to another in Network Mobility Basic Support protocol (NEMO BSP). Accordingly, advance preparation mechanism (i.e. Fast Hierarchical Mobile IPv6) works very well as a node mobility solution in order to solve these matters. Yet, combining this host-based protocol for macro mobility handoff in NEMO environment is a challenging issue as both MR and its Mobile Network Nodes (MNNs) must be taken into consideration. In this paper, a numerical framework is developed to study the total handoff cost of Macro Mobility scheme in NEMO (MM-NEMO). The numerical results confirms that MM-NEMO scheme outperforms the standard NEMO BSP related to total handoff delay cost (51 % less than that of NEMO-BSP) regardless of increasing the number of MRs as well as cell residence time. © Springer International Publishing Switzerland 2015.

Author keywords

MM-NEMO MNN MR NEMO BSP Total handoff delay cost

Indexed keywords

Engineering controlled terms: Costs Mobile telecommunication systems Telecommunication networks Wireless networks

Hand-off delay

MM-NEMO

MNN MR

Nemo bsp

Engineering main heading: Routers

ISSN: 18761100

ISBN: 978-331917268-2

Source Type: Book series

DOI: 10.1007/978-3-319-17269-9_9

Document Type: Conference Paper

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