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Novel multihoming-based flow mobility scheme for proxy NEMO environment: A numerical approach to analyse handoff performance (Article)

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Abstract

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With Network Mobility Basic Support Protocol (NEMO BSP), each communication should pass via the home agents of all mobile routers earlier reaching their destination at the time of frequent movement among the inter-technology handoff. This eventually results in performance deterioration of the real time application scenarios conducted on mobile nodes. Accordingly, applying the multihoming technique at any place, anywhere to provide uninterrupted internet connection in NEMO is becoming a significant area for current researchers. Although multiple care-of address registration between mobile routers along with its home agents can overcome some of the multihoming issues for NEMO, one still requires a dynamic flow redirection mechanism to support mobility management in NEMO. With the intention of reducing handoff delay, a novel multihoming-based flow mobility scheme on the PMIPv6 domain in NEMO (MF-PNEMO) is proposed in this paper. In addition, the performance of the MF-PNEMO scheme is evaluated through a numerical approach. The evaluation results confirms that the MF-PNEMO scheme outperforms the standard NEMO BSP as well as fast-proxy NEMO (FPNEMO) concerning handoff delay during inter-technology handoff.

Author keywords

FPNEMO Inter technology MCoA NEMO BSP

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