ABSTRACT
Mobile IP is developed by IETF for increasing needs of user mobility. Mobile IP defines a global mobility solution that provides host mobility management on the Internet. In Internet environments, when an MN (Mobile Node) moves from its HN (Home Network) and attaches itself to FN (Foreign Network), it obtains a new IP address to retain its network connectivity. Moreover, Mobile IPv6 has been introduced by IETF, in order to adapt the next generation internet protocol IPv6. Most internet backbone today is still supporting IPv4 only. However, Mobile IP and Mobile IPv6 are designed for IPv4 only and IPv6 only respectively. We propose a novel mechanism to integrate Mobile IPv6 and existent internet. This mechanism also introduces the IPv6-destination options extension header for route optimization. We compared our mechanism with EMIPv4 [10] to investigate the loading on HNGW (Home Network Gateway) and the end-to-end delay between MN and CN. According to the discussion, we claim that our method yields significant improvement, and does not introduce much burden to network equipments.

Keywords: Mobile IP; Transition Mechanism; Tunneling; Mobile Management

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