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# An Improved LISP Mobile Node Architecture

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**Abstract**

The increased use of mobile devices has prompted the need for efficient mobility management protocols to ensure continuity of communication sessions as users switch connection between available wireless access networks. Locator Identifier Separation Protocol Mobile Node (LISP-MN) was designed to enable such efficient mobility of nodes on the Internet. The protocol enables mobility by ensuring that the IP address used for creating data session is maintained throughout the lifetime of the communication session and the location of the mobile node (MN) is updated as the device moves. While session continuity is achieved during handover, we observed that LISP-MN records loss of packets in transit, long service disruption time, throughput degradation and increased rate of TCP retransmission as an MN conducts a handover from one access link to another. To mitigate the poor handover performance, we introduced a novel network node into the LISP-MN architecture, a loc-server, that buffers the packets sent to an MN during handover and forwards to the device upon completion of the movement process. We analysed both qualitative features and quantitative measurements of vanilla LISP-MN against LISP-MN with loc-server support. Results show that the improved architecture significantly improved the performance of LISP-MN in all the investigated parameters.

*Keywords:* Locator Identifier (Loc/ID) Split, Handover, Mobility, LISP, LISP-MN, Network Architecture

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