IETF#88
Mobility API for DMM
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RFC 5014 defines socket API extension used for source address selection. Application can use this API to override the default source address selection mechanism for IPv6.

Currently, RFC 5014 defines the following type of source address selection preference:

- `IPV6_PREFER_SRC_HOME /* Prefer Home address as source */`
- `IPV6_PREFER_SRC_COA /* Prefer Care-of address as source */`
- `IPV6_PREFER_SRC_TMP /* Prefer Temporary address as source */`
- `IPV6_PREFER_SRC_PUBLIC /* Prefer Public address as source */`
- `IPV6_PREFER_SRC_CGA /* Prefer CGA address as source */`
- `IPV6_PREFER_SRC_NONCGA /* Prefer a non-CGA address as source */`
Problem

• In DMM scenario, applications on the MN need to select the proper IP address based on the prefix type
• RFC5014 need to be extended to allow MN in DMM scenario select source address
New extensions of RFC5014

- **IPV6_PREFER_SRC_LOCAL_HNP:**
  - Prefer to use locally allocated home network prefix.

- **IPV6_PREFER_SRC_REMOTE_HNP:**
  - Prefer to use the home network prefix that allocated by other access router instead of the one that the MN currently attach.
Usage example

• In appropriate DMM scenarios, the application on the mobile node can always select the IPV6_PREFER_SRC_LOCAL_HNP as the most preferred source address.

• The mobile node's operating system must guarantee that the on-going session will not be interrupted even if a new prefix is available.
Implementation example

• [I-D.ietf-6man-rfc3484bis] document indicates possible implementation strategies for getaddrinfo().

• The address selection hint flags for the getaddrinfo() specified in this document extend the 'int ai_eflags' field in the struct addrinfo [RFC5014].

• The IPV6 source address preference values (IPV6_PREFER_SRC_HNP and IPV6_PREFER_SRC_HNP_TMP) defined for the IPV6_ADDR_PREFERENCES socket option are also defined as address selection preference flags in <netdb.h> header for the "ai_eflags" extended flag-set field of the addrinfo data structure.

• Corresponding extensions can be done for mobility address selection.
• Q&A