Use Cases and API Extension for Source IP Address Selection

draft-sijeon-dmm-use-cases-api-source-02.txt

Seil Jeon, Sergio Figueiredo, Younghan Kim, John Kaippallimalil
Status

• Appealed and discussed in the mailing list
• Presented at DMM WG in 92\textsuperscript{nd} IETF meeting (Texas, US)

• (-01) updated at Jun. 2015
  – Proposed API name changed with texts elaboration

• (-02) updated at Oct. 2015
Overview

• Use cases analyzed, based on the three IP address types defined in draft-ietf-dmm-ondemand-mobility

• Tackling an issue found in the analysis, a socket API was proposed to indicate IP prefix preference of an APP to the IP layer
In more details ...

• A terminal is likely to have multiple Sustained IP addresses on the deployment of distributed mobility anchors

• The on-demand draft assumes a fixed way of selecting the Sustained IP address for an initiated application
  – Selecting new Sustained IP address as possible

• It should be figured out in the context of the default source IP address selection in RFC 3484
Prior RFC

- RFC 3484, “Default Address Selection for IPv6”

- For example,
  - Rule 8: Use longest matching prefix.
  - If $\text{CommonPrefixLen}(SA, D) > \text{CommonPrefixLen}(SB, D)$, then prefer SA.
Example

- app1 was assigned with Sus-A::
- app2 was assigned with Sus-B::
- app3 should get Sus-C::?
ON_NET property

- IPV6_XX_SRC_ON_NET

- /* Require (or Prefer) an IP address based on a requested IP address type as source, assigned from the current serving network, whatever it has been assigned or should be assigned */
Way Forward

• Adoption for a WG document?