

On Demand Mobility Management

draft-ietf-dmm-ondemand-mobility-02

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Purpose

Enable applications to indicate their IP session continuity needs in a mobile environment, and have the network provide the appropriate services.

An enhancement to RFC5014 - IPv6 Socket API for Source Address Selection

How?

- Enhance the Socket API with the following IPV6_ADDR_REFERENCE flags:
 - IPV6_REQUEST_FIXED_IP
 - IPV6_REQUEST_SUSTAINED_IP
 - IPV6_REQUEST_NOMADIC_IP

And new error codes:

- EAI_REQUIREDIPNOTSUPPORTED
- EAI_REQUIREDIPFAILED

What are these different IP Services?

- A '**FIXED**' source IP address is an address that is allocated and managed by the Home Agent (Home Address – in PMIP). It will exist no matter where the host moves to and will exist as long as the host is connected to the network.
- A '**SUSTAINED**' source IP address is an address allocated by a mobility anchor in a DMM environment. It is valid as long as the IP session is alive. Once the IP session is terminated, it may be lost and the network does not guarantee to provide it again when the host attempts to establish a new IP session
- A '**NOMADIC**' IP address is an address provided by the network with no IP session continuity guarantee. This means that when a mobile host moves to a geographical area serviced by a base-station that is connected to a LAN with a different IP prefix, packets will not be able to reach the mobile host and it will have to reset its IP session

Current Status

- Is being referenced by 3GPP SA2 activity for 5G (S2-161020 Session Continuity – submitted by Lenovo)
- First WGLC process ended
 - Various comments
 - Outcome is a new version (02) with some modification
 - Still open:
 - The ‘Nomadic’ term is in debate. Possible alternatives: ‘Guarantee-less’, ‘Non-persistent’, ‘Volatile’
 - Should the draft add a description of when the IP session continuity should be requested by the application
- Start a second WGLC