Communicating Prefix Cost to Mobile Nodes
(draft-mccann-dmm-prefixcost-02)

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Introduction

When an MN moves from one IP attachment point to another, it does not know about:

- amount of state in network on behalf of this prefix
- amount of transport resources to tunnel/route packets

The network does not know:

- the state of the connection flow (e.g., middle of download?)

Proposal in this draft:
Network provides the “cost” of maintaining IP prefixes to the MN.

Notes:
(a) Prefix-cost is not about e2e jitter or latency.
(b) Link layer changes do not affect prefix cost.
Motivation (1)

Current Mobile Network/ first router (PGW)

(1) Sub-optimal route with centralized gateway/anchor (PGW).
(2) Routers located closer to MN’s point of attachment are more optimal.

When MN changes point of attachment, cost of the maintaining the prefix increases.
(state in gateways, tunnels – and suboptimal route)
Network provides the cost of maintaining IP prefixes. MN decides when to use new IP prefix.
Prefix Cost Sub-option
(Router Advertisement)

The prefix cost is carried as a 16-bit, unsigned number in network byte order. A higher number indicates an increased cost.

Uses: draft-korhonen-dmm-prefix-properties-04
IETF next steps

Review with 6man, mif

Feedback?
- Operator policy on “prefix cost” values.
- RFC 6724 source address selection rules should be factored in
  - Re-select IP address if current IP address exceeds [cost-ceiling].
  - If new-IP-address has [acceptable cost], present new addr to application.