MIP4 WG
IETF-70

Service Selection for Mobile IPv4

draft-korhonen-mip4-service-02

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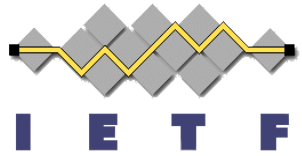
Need for a Service Selection with Mobile IPv4

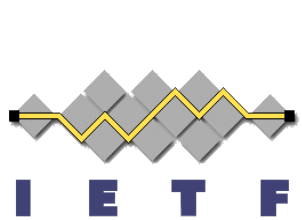


- In some (Proxy) MIP4 deployments identifying the MN is not enough
  - to distinguish between multiple services provisioned to the MN
  - to distinguish between multiple external networks provisioned to the MN
  - to distinguish between different subscription & policy profiles

- An operator (mobility service provider) might want to provide its subscribers:
  - An enterprise data access for which the operator hosts connectivity and mobility services on behalf of the enterprise
  - Access to service domains / external networks that are otherwise not accessible because of some operator's business reasons
  - Simultaneous access to different service domains / external networks that are separated based on operator’s policies

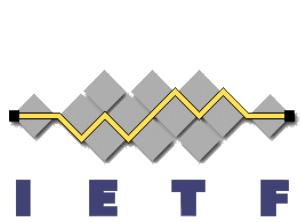
- Enable easier policy assignment for operators based on the subscribed services
- Enable easier hosting of mobility services for virtual operators

Changes Since IETF #68



- Alignment with the detailed comments received for the MIPv6 equivalent mobility option (from Jari, Brian, Tim, ...)
  - Processing of the Service Selection extension in different scenarios
  - Service identifier format -> UTF-8
  - Default behavior
  - Description of potential deployment and policy specific consequences on IP connectivity
  - Use of Service Selection is decoupled from the use of NAI option (even if the following examples all use NAI option ;)
  - Number of option occurrences explicitly defined to one

Processing Example of the Service Selection



- Initial RRQ in a SS aware HA
  - case 1) HoA = 0.0.0.0, NAI = "foo@bar.com", SS = "corporate"
    - HA processes RRQ normally and also authorizes SS against the subscription profile -> allocates HoA based on NAI and SS
  - case 2) HoA = 0.0.0.0, NAI = "foo@bar.com", no SS
    - HA processes RRQ normally -> allocates HoA based on NAI based on the "default" policies in the HA
  - case 3) HoA = 0.0.0.0, NAI = "foo@bar.com", SS = "good_QoS"
    - HA processes RRQ normally and also authorizes SS against the subscription profile -> allocates HoA based on NAI and installs traffic policy & QoS handling based on the SS

- New RRQ in a SS aware HA, a binding exists, HoA = 1.2.3.4 and SS = "corporate"
  - case 1) HoA = 0.0.0.0, NAI = "foo@bar.com", SS = "leisure"
    - HA processes RRQ normally and also authorizes SS against the subscription profile -> allocates a new HoA = 5.6.7.8 based on NAI and SS, and a new MIP tunnel gets created

Processing Example of the Service Selection cont'd

- Re-RRQ in a SS aware HA, previous SS = "abcd", SS affects HoA
  - case 1) HoA = 1.2.3.4 -> normal RRQ processing
  - case 2) HoA = 1.2.3.4, SS ="abcd" -> normal RRQ processing
  - case 3) HoA = 1.2.3.4, SS = "xxxx"
    - HA processes RRQ normally. Authorization of the SS against the subscription profile indicates that the SS would cause an assignment of a new HoA -> HA fails the re-registration, removes this particular binding (for HoA 1.2.3.4) and sends a RRP with an error

- Re-RRQ in a SS aware HA, previous SS = "abcd", SS affects QoS etc
  - case 1) HoA = 1.2.3.4 -> normal RRQ processing
  - case 2) HoA = 1.2.3.4, SS = "abcd" -> normal RRQ processing
  - case 3) HoA = 1.2.3.4, SS = "xxxx"
    - HA processes RRQ normally. Authorization of the SS against the subscription profile succeeds and the profile indicates that the SS affects traffic policies -> HA installs new policies and sends an OK RRP

Questions & comments?
Consider as a WG item?