Multiple Care-of Address Registration
draft-wakikawa-mobileip-multiplecoa-04.txt

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From Monami6 Charter

● A protocol extension to Mobile IPv6 (RFC 3775) and NEMO BasicSupport (RFC 3963) to support the registration of multiple Care-of-Addresses at a given Home Agent address [Standard Track].

● Jun 05 Submit Multiple CoA Registration to IESG
issue 1. Separate BUs vs. Single BU

- Single Binding Update Pros
  - Reducing number of signaling
  - No BID is necessary
    - Note: new option and modification to RFC3775 are also needed

- Cons
  - Painful with a longer list of care-of addresses
  - Possibly the same number of BUs to transmit
    - It needs to send all the CoAs even if a single CoA is changed
  - Fragmentation Consideration?

- If WG wants to consider both separate BUs and single BU, MCoA draft easily support this feature as well as separate BUs in Spec.
  - The reason not to support is due to limiting MIP6 modification, not technical reason
issue 2. Identification of BC entry?

- Possible solutions
  - add/replace all CoAs (forget to identify BC)
  - keying an old CoA (128bit)
  - keying a BID (16bit)
- Identification is important
  - capable of both single BU and independent BU exchanges
  - capable of eliminating the overhead of sending all CoAs
- Our proposition is “We need some identification“

- BID vs. old CoA
  - “BID” and “old CoA” is basically same as “identification”
  - The use of old CoA is 8 times longer than BID.
    - It obviously causes a longer BU which should be avoided
  - BC may be required to search with BID.
    - Searching the best CoA is done by policy search.
Issue 3.
Is “primary” CoA necessary?

- Primary CoA is introduced for “returning home”
  - MN de-registers the binding only when it returns home with the primary interface.
  - MN terminates the “non-primary” interface when it attaches to home with it.

- Using priority value per CoA
  - we did have priority field in the past draft, but leave it for policy exchange spec.

- Allowing returning home by “non-primary CoA”
  - Removing Primary/Non- from the spec, and leave this as implementation matter
Issue 4. IPsec/Security

- Vijay will present issues right after me
other issues

- Flag in BU is scare:-)
  - remove the flag. fine.

- Is DHAAD necessary?
  - for discovery of MCoA capable HAs
  - just remove or keep

- Suspend Mode (comment)
  - during returning home, suspend all the other active CoAs. The suspend mode help reregistering such CoAs again.
  - need to support this?

- Multiple CoAs on an interface
  - not MCoA specific issue
Implementation Info.

- BSD
  - SHISA, KAME project in WIDE (NEMO code is verified)
- LINUX
  - MIPL, the EU funded IST Daidalos project
  - NEPL, Nautilus Project in WIDE (ongoing)
- KDDI R&D Mobile Router
  - interoperability with SHISA

- We believe the base part is fairly stable, but need more updates regarding security
How to proceed this work?
The problem is obvious to solve in Monami6 WG
We need base spec for monami6 goal