GRE Extension for Mobile IPv4

draft-mip4-gre-key-extension-01.doc
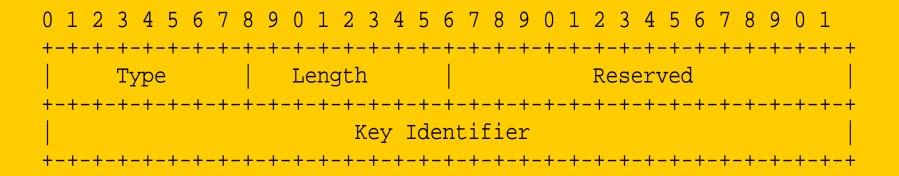
Parviz Yegani   **pyegani@juniper.net**

Kent Leung
Avi Lior
Kuntal Chowdhury
Jay Navali

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The Draft

=> Specifies a new extension for GRE Key for use by MIPv4 FA

=> This new extension option allows an FA to request GRE tunneling **without disturbing the HA behavior** defined in RFC 3344

=> GRE tunneling provides an advantage that allows operator's private home networks to be overlaid and allows the HA to provide overlapping home addresses to different subscribers

=> The GRE Key format defined in RFC 3344. This extension must be added after the MN-HA and MN-FA Challenge and MN-AAA extensions (if any) and before the FA-HA Auth extension (if any)

GRE Key Extension Format

```
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|      Type         |      Length       |           Reserved           |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                          Key Identifier                           |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

Key (4 octet)- assigned in the Registration and inserted in every GRE frame. **Value to be assigned by IANA**.

Changes in -01

HA Behavior

=> If the HA receives the GRE Key Extn in an RRQ and does not recognize it, it must send an RRP per RFC 3344

=> If the HA receives the GRE Key Extn in an RRQ and recognizes it but is not configured to support GRE encap, it must send an RRP with code 'Requested Encapsulation Unavailable' per RFC 3344

=> REMOVED - If the HA receives an RRQ with the 'G' bit set but without the GRE Key Extn, it must send an RRP with code 'Poorly Formed Request'

=> If the HA receives an RRQ with a GRE Key Extn but without the 'G' bit set, the HA should treat this as if 'G' bit is set in the RRQ i.e., the presence of GRE Key Extn indicates a request for GRE encapsulation

Next Step

=> **WG LC ?**