Lightweight 4over6: An Extension to DS-Lite Architecture

draft-cui-softwire-b4-translated-ds-lite-11
IETF 86-Orlando, March 2013

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Overview of Lightweight 4over6

- A simple extension for DS-Lite
  - The Binding approach described in the unified CPE draft
- Per-subscriber state maintenance on AFTR
  - Good scalability for overwhelming traffic; easy/no logging
- No IPv4/IPv6 address coupling
  - Operation simplicity: no extra requirement on address planning
  - Flexible port management: on-demand/pre-configured IPv4 addr + port-set provisioning
- DS-Lite backward compatibility
Self-determined mapping in lw4o6

- Operators have full flexibility on addressing planning and configuration.
- Subscribers can simplify retrieve the port-set+IPv4 address.
Outcome of IETF-85

- WG guidance on next step
  - A new draft describing a ‘unified’ softwire 4o6 CPE (incl. MAP and lw4over6)
  - Lw4over6 can move forward based on unified CPE

- A successful interop demo at the BnB event
  - Including five participants from Huawei, Tsinghua, GreenNet, China Telecom, Yamaha
Updates from -09

- Specify the relationship of lw4o6 and unified CPE
- Simplify the CE configuration parameters part by giving a reference to the section 2.2 of unified CPE
- Modify the lwB4 Provisioning by referencing to unified CPE
- For port-set algorithm, add a reference to unified CPE and MAP.
- Substantial edits.
Update Test/Trial

• We have published the source code on:
  – http://sourceforge.net/projects/laft6/

• We already have run field trial/test in:
  – China Telecom, Deutsche Telekom, CERNET2, Freebit

• We already have conducted Interop test among five participants:
  – Huawei, Tsinghua, GreenNet, China Telecom, Yamaha

• We already have commercial products from
  – lwAFTR: Huawei, Juniper
  – lwB4: Fiberhome, Yamaha
  – Other vendors are also implementing it…
Next Steps

• The current version reflects the requirements of the WG
• The implementation and trial result are good
• Call For Workgroup Adoption?