Gateway Initiated Dual-Stack lite
(draft-gundavelli-softwire-gateway-init-ds-lite-03)
Status Update

Authors:
Frank Brockners (fbrockne@cisco.com),
Sri Gundavelli (sgundave@cisco.com),
Sebastian Speicher (sebastian.speicher@telekom.de),
David Ward (dward@juniper.net)

IETF 77, Anaheim, USA
3GPP-IETF Workshop Outcome*
March, 1-2 2010

• Quotes from Workshop Report (IPW100060):*

Conclusions on solutions
“[...] Solutions enhancing existing mechanisms for dual stack deployments and new solutions for IPv6-only deployments drew wide support
Gateway-initiated Dual Stack Lite [...]”

Next Steps IETF
“[...] IETF is also encouraged to consider new solutions that are not yet working group items
Gateway Initiated DS Lite [...]”

Gateway-initiated Dual-Stack lite
Concept Recap

- Gateway tunnels traffic which requires NA(P)T towards CGN/AFTR
  - Gateway and CGN/AFTR use Context-ID (CID) for Flow-Identification:
    AFTR/CGN can employ flexible NAT schemes (e.g. CID to external IPv4)
  - Multiple tunnel types possible (IPinIP, IPinGRE, MPLS VPN);
    in case of GRE w/ IPv4 address on UE is not used for packet forwarding;
- Network between Gateway and AFTR can be IPv4, IPv6, or MPLS
- End-System/UE & Access & Roaming Architecture remains unchanged
Status

-01 version presented at IETF #76

Key updates in -03

- Clear separation of generic concept and implementation examples.

  Concept in brief:
  
  - Access gateway softwire-tunnels those IPv4 flows which require NA(P)T to an AFTR
  - Combination of “Tunnel-Identifier” and “Context Identifier (CID)” (used to multiplex flows from different access-devices onto a single tunnel) serves a common context to identify flows on Gateway and AFTR

- Expanded Tunneling Considerations

  - Multiple tunnel/encapsulation types defined:
    - IPinGRE (CID = GRE-key); IPinIP (CID=Inner-IP); MPLS VPN (CID=Inner-IP)
  
  - Considerations for tunnel management
Next Steps

• The authors appreciate additional comments/feedback
• Adopt as WG document?