

# Gateway Initiated Dual-Stack lite

(draft-gundavelli-softwire-gateway-init-ds-lite-03)

## Status Update

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# 3GPP-IETF Workshop Outcome\*

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- 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*

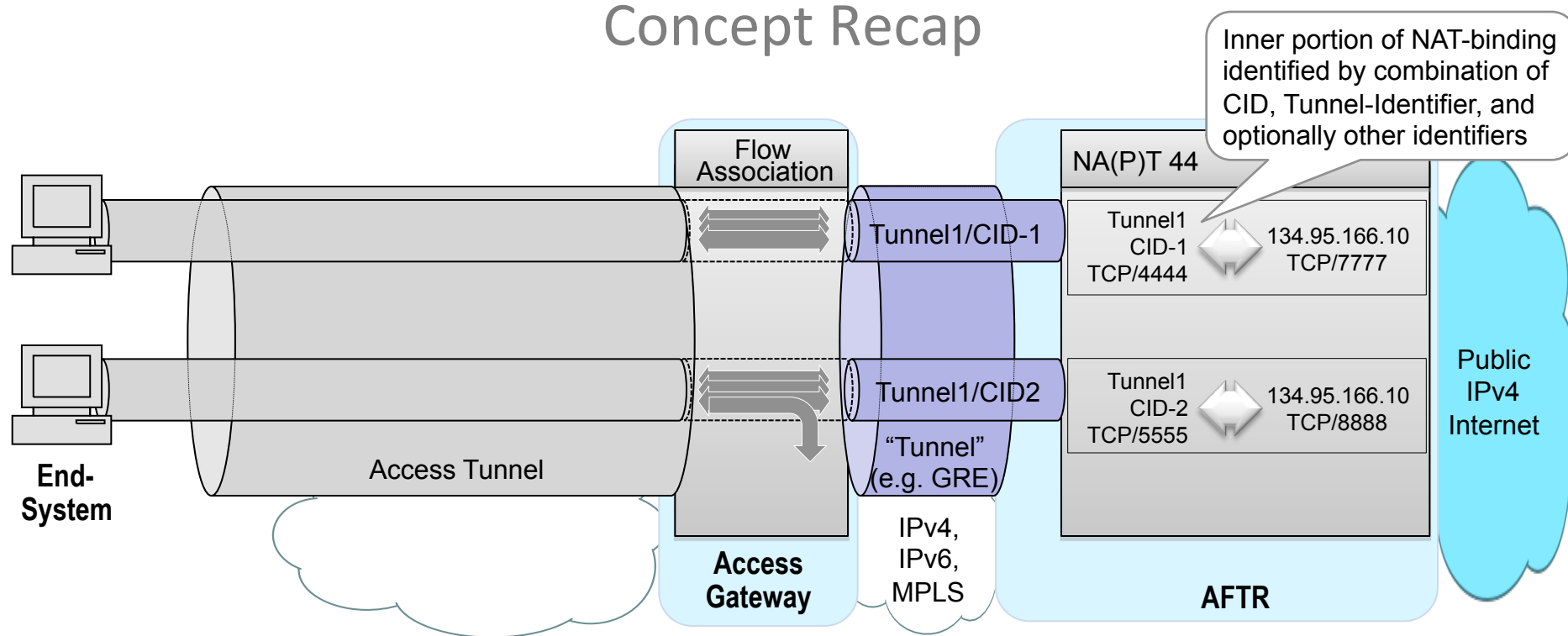
*“[...] IETF is also encouraged to consider new solutions that are not yet working group items*

*Gateway Initiated DS Lite [...]”*

\* See [http://www.3gpp.org/ftp/workshop/2010-03-01\\_IPv4-to-IPv6\\_with-IETF/Report/IPW100060.zip](http://www.3gpp.org/ftp/workshop/2010-03-01_IPv4-to-IPv6_with-IETF/Report/IPW100060.zip)

# Gateway-initiated Dual-Stack lite

## Concept Recap



Example

- 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 software-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?