
Address space for

Carrier Grade NAT (CGN)

draft-shirasaki-isp-shared-addr-00.txt

related to draft-nishitani-cgn-00.txt

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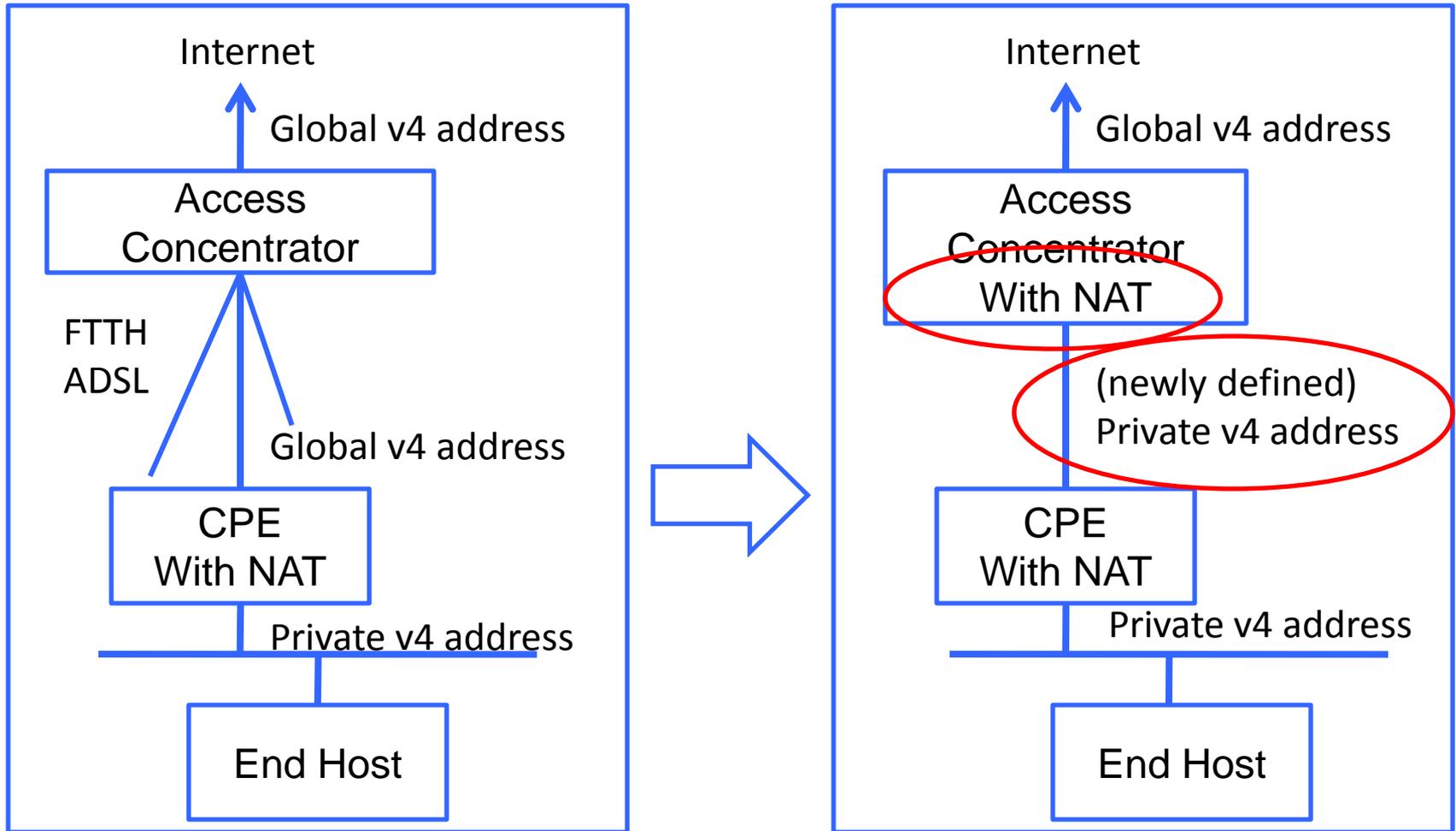
iTSCOM

Background

- Because of IPv4 address “completion”, to allocate global IP address for CPEs is going to be difficult within few years.
- Basic strategy
 - Building NAT by ISP and allocating (newly defined) private IP addresses for CPEs
 - We call this as “Carrier Grade NAT (CGN)”.

Most conservative access model changes

- introducing “Carrier-Grade NAT” -



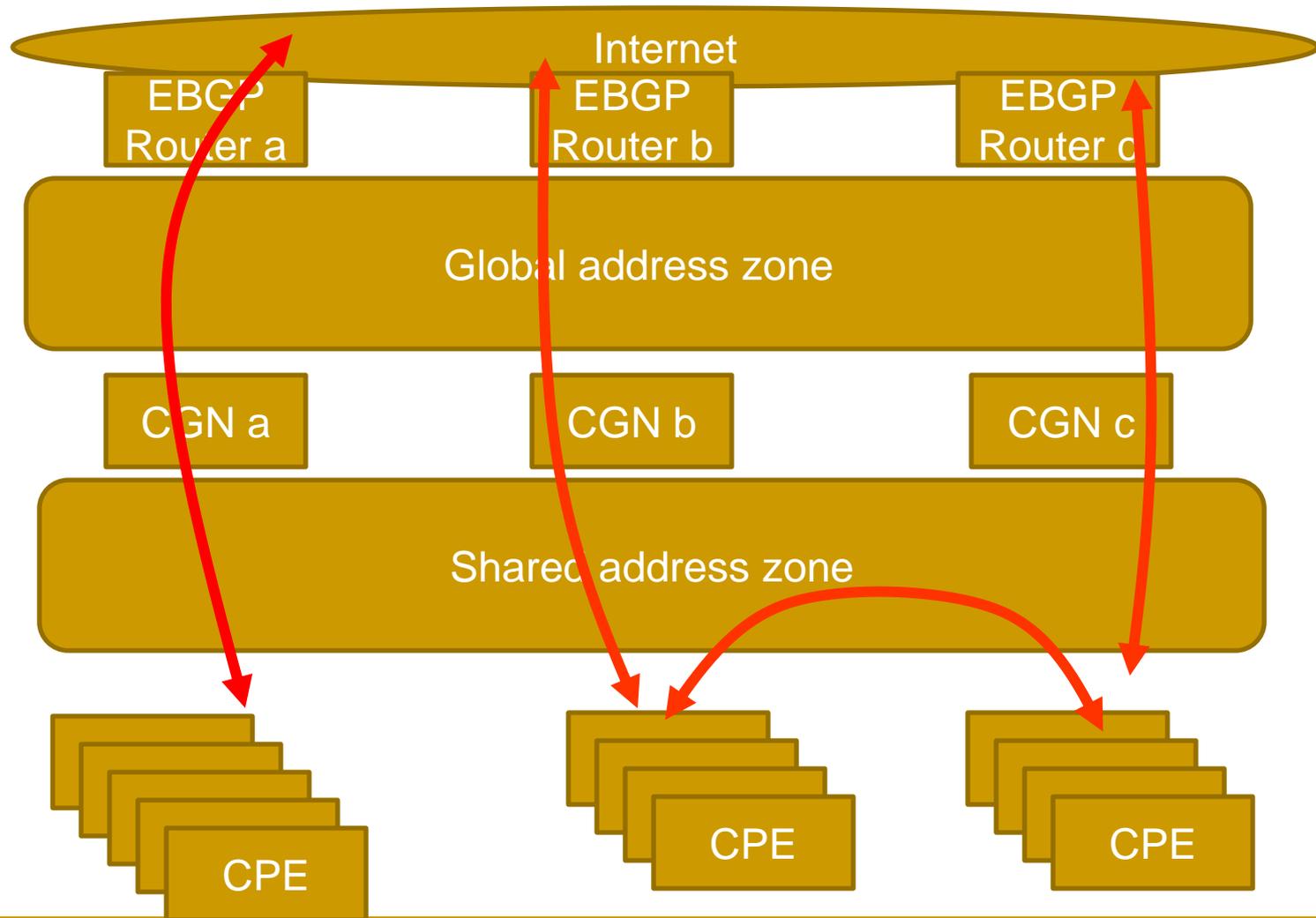
We need new private space for CGN other than 240/4

- Because we'd like to keep CPE router as is, we can **not** use 240.0.0.0/4 as CGN's new private space.
 - Simply today's IPv4 implementation does not work well on 240.0.0.0/4
 - If CPE router firmware can be upgraded, it means that it can be upgraded to IPv6 compatible. Way better.
 - “dual stack lite” does not need this but it requires CPE router replacement. This is the pros-and-cons.
 - We are discussing this issues in
 - [draft-shirasaki-isp-shared-addr-00.txt](#)
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Proposal

- defines "ISP Shared Address" to be jointly used among ISPs
- It is intended to be assigned between CPE and CGN
- This space must not to be advertised to the Internet

ISP with CGN (v4 portion)



The size of the address space is TBD
but here is the data

- Size vs ISP Coverage
- /10 - 49%
- /9 - 58%
- /8 - 69%
- /7 - 85%
- /6 - 96%
- /5 - 100%