

(IETF73)

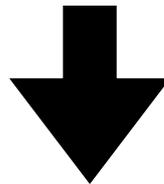
LSN + NAT444 + ISP Shared Address

2008. 11

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CGN (Carrier Grade NAT)

Sounds for Carrier-only



LSN (Large Scale NAT)

for Carrier
ISP
Enterprise
etc.

Rearrangement of Internet Drafts

IETF72
(2008. 7)

(Interim Mtg.)

IETF73
(2008. 11)

NAT
Function

CGN-00

CGN-01

CGN-01 is applicable to other network model.

Network
Model

NAT444-00

DS-Lite

Other Models

Address

ISP Shared Address-00

ISP Shared Address-01

Three Internet Drafts

1. Common functions of Large Scale NAT (aka CGN)

Common Functions of Large Scale NAT (LSN)

draft-nishitani-cgn

2. NAT444 Network Model

NAT444 with ISP Shared Address

draft-shirasaki-nat444-isp-shared-addr

3. Address

ISP Shared Address

draft-shirasaki-isp-shared-addr

Network Structure

Internet

v4 (G)

v6

v4 (G)

LSN (Large Scale NAT)

NAT444

DS-
Lite

Other
Models

Common functions of
Address Translation

Network Models +
NW Specific
Technology

•Shared Address

Carrier, ISP and
Enterprise can choose
their favorites.

CPE etc.

v4 (P) + v6

Consumer / Enterprise

(1) Spirits of Large Scale NAT (aka CGN)

This I-D describes common functions of NAT for Carrier, ISP, Enterprise...

- **High transparency**

- ✧ Minimum changes for upper layer data

- **Fairness of communication for CPEs**

- ✧ Limiting number of ports and TCP sessions per CPE

- **High connectivity**

- ✧ Enabling Hairpinning and UDP/TCP hole punching

- **Tracking particular users (BOTs, spammers, etc)**

- ✧ Logging Function or

- ✧ Fixed port assignment etc.

(2) NAT444 Network Model

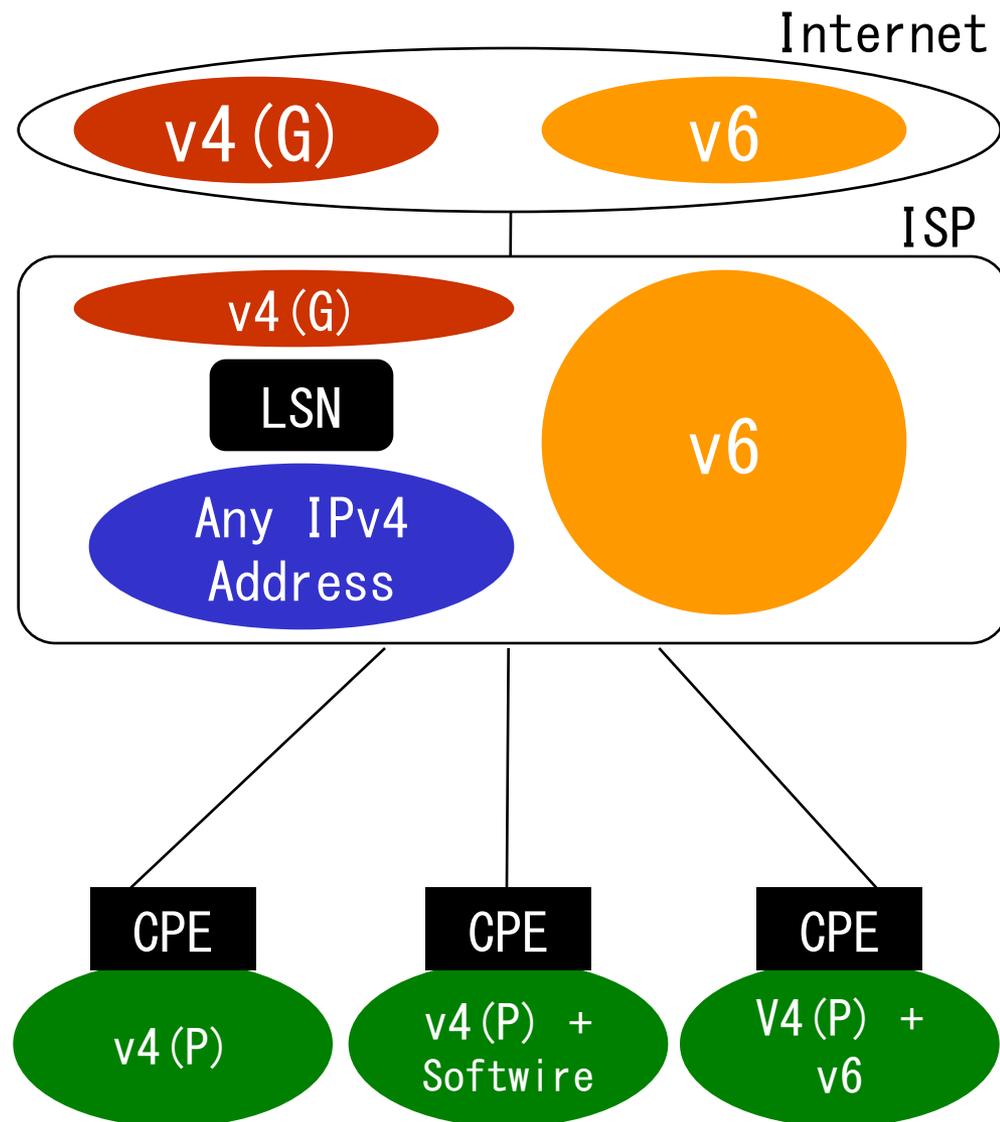
◆ Definition

It is a network model that uses ISP NAT44 and CPE NAT44.

◆ IPv4 Address between LSN & CPE could be any IPv4 Address.

We propose ISP Shared Address at Intarea.

◆ Supposed to co-exist with IPv6 network.



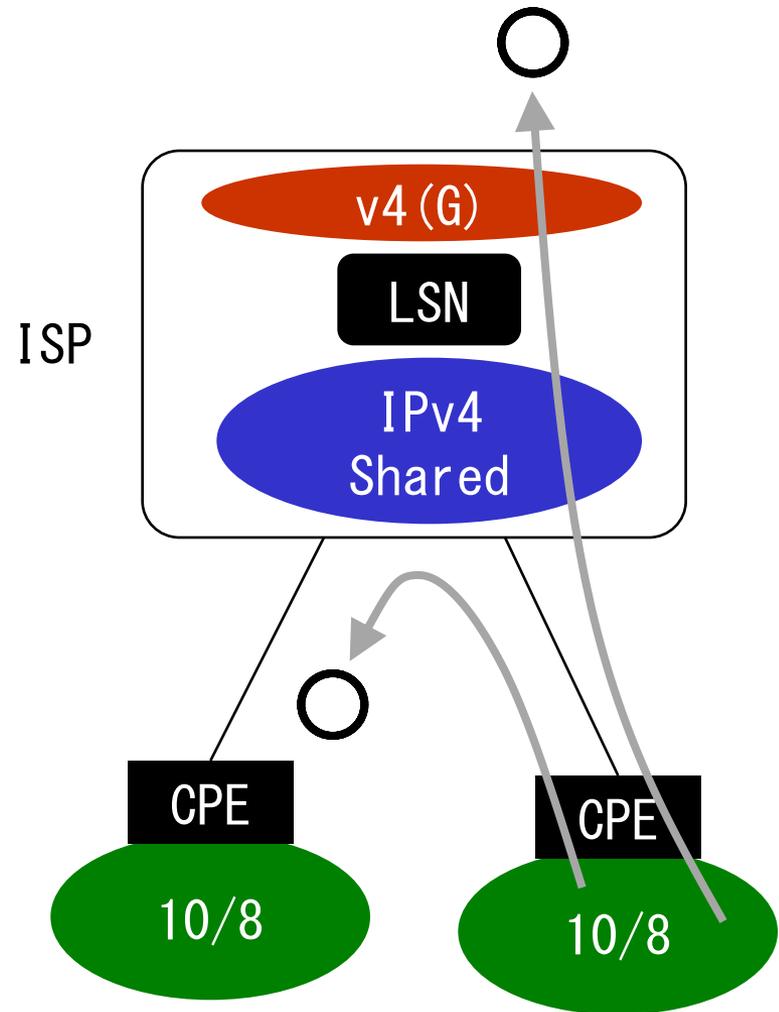
(3) ISP Shared Address

◆ Definition

- Newly defined IPv4 address block
- Only for ISP network.
- Each ISP uses same block.

◆ Suitable for NAT444 network model.

◆ Will be discussed at Intarea this PM.



Summary and Next Step

