A proposal for changing IPv6 per address fee

Izumi Okutani

Japan Network Information Center

NIR SIG@APNIC 18, Fiji

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Introduction

This presentation proposes to revise a method of calculating IPv6 per address fee in order to abolish duplicate fees charged for the same address range

Background

- The current fee schedule leads to charging IPv6 per address fee for the whole prefix when receiving contiguous range from the previous allocation

Current IPv6 per address fee (APNIC-081)

3.4.3   IPv6 address space

For an allocation of IPv6 address space, the total per-address fee is calculated for the prefix allocated according to the number of addresses which should be utilised according to an HD-Ratio of 0.80.

 (snip..)

In the case of an allocation which includes a previously allocated block of addresses, the total fee calculation is based on the size of the prefix allocated, regardless of _ the previous allocation.

Current IPv6 per address fee Case Study

Case-1 : /32 initially, upgrade to /31, then to /30

Initial allocation (/32)   : 7,132 x per address fee
Second allocation (/32, /31 in total) : 12,417 x per address fee
Third allocation (/31, /30 in total) : 21,619 x per address fee
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Fee total   : **78,809** x per address fee
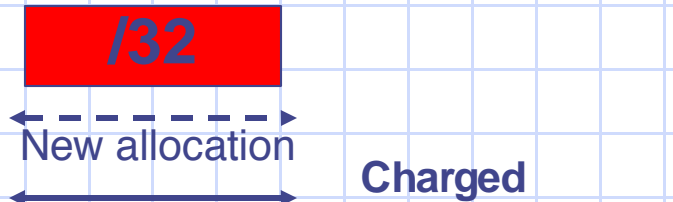
Case-2 : /30 initial allocation

Initial allocation (/30)   : 21,619 x per address fee

Fee total   : **21,619** x per address fee

/32

New allocation

Charged

/31

Paid(/32)   New allocation (/32)

Charged(/31)

/30

Paid (/32)*2   **Paid(/32)**   New allocation(/31)

Charged(/30)

Problem

◆ Current fee calculation scheme is "redundant", charging to the address space which had previously been charged

◆ Conservative, or small/medium ISPs must pay more fee in total

◆ JPNIC is not able to provide a reasonable explanation to our members

Proposal

◆ Define IPv6 per address fee so that it only charges for the ranges which had been additionally allocated, regardless of contiguous range

Proposed description of APNIC-081

3.4.3   IPv6 address space

…

In the case of an allocation which includes a previously allocated block of addresses, the total fee calculation is <u>based on the difference of the number of /48s corresponding to HD-ratio 0.8</u>, between the previous allocation and the new allocation.

For example, the total per-address fee payable for an allocation of /30 including previous /32 allocation to a Very Large member is calculated as:

$$(21,619 - 7,132) \times \$ 0.03 = \$ 434.61$$

Proposed fee scheme

7. Appendix A: HD-Ratio

"IPv6 Address Allocation and Assignment Policy"

P	48-P	Total /48s	Threshold	Util%
32	16	65536	7132	10.90%
31	17	131072	12417	9.50%
30	18	262144	21619	8.20%

◆ /32 to /31

    (12,417 - 7,132) x per address fee

◆ /31 to /30

    (21,619 - 12,417) x per address fee
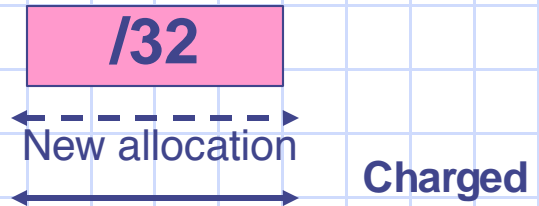
◆ /32 to /29

    (37,641 - 7,132) x per address fee

Proposed Fee Scheme Case Study

Case-1 : /32 initially, upgrade to /31, then to /30

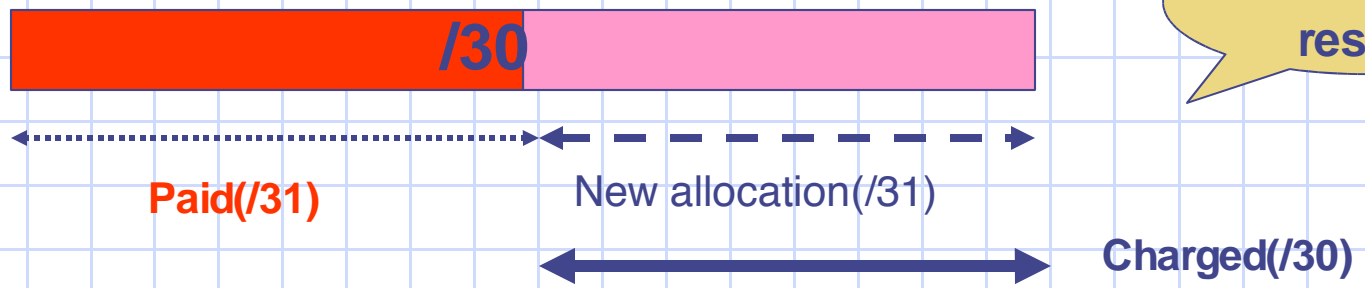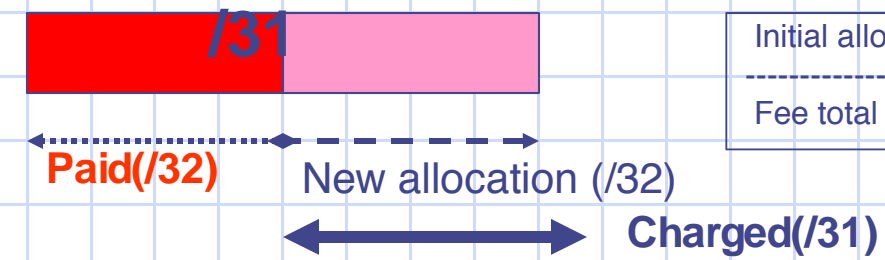|	
Initial allocation (/32)	: 7,132 x per address fee
Second allocation (/31 in total)	: (12,417-7,132) x per address fee
Third allocation (/30 in total)	: (21,619-12,417) x per address fee
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Fee total	: **21,619** x per address fee

/32

New allocation

Charged

Case-2 : /30 initial allocation

Initial allocation (/30)	: 21,619 x per address fee
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Fee total	: **21,619** x per address fee

/31

Paid(/32) New allocation (/32)

Charged(/31)

/30

Same result!

Paid(/31) New allocation(/31)

Charged(/30)

Effect

- NIRs will no longer need to pay duplicate per address fee

- APNIC's operational expense   ?

Implementation

◆ Proposed timeframe

3months after EC endorsement (normal timeframe)

◆ Documents to be changed

APNIC-081 "member-fee-schedule"

Questions?