Global policy for the allocation of the remaining IPv4 address space

Prop.051
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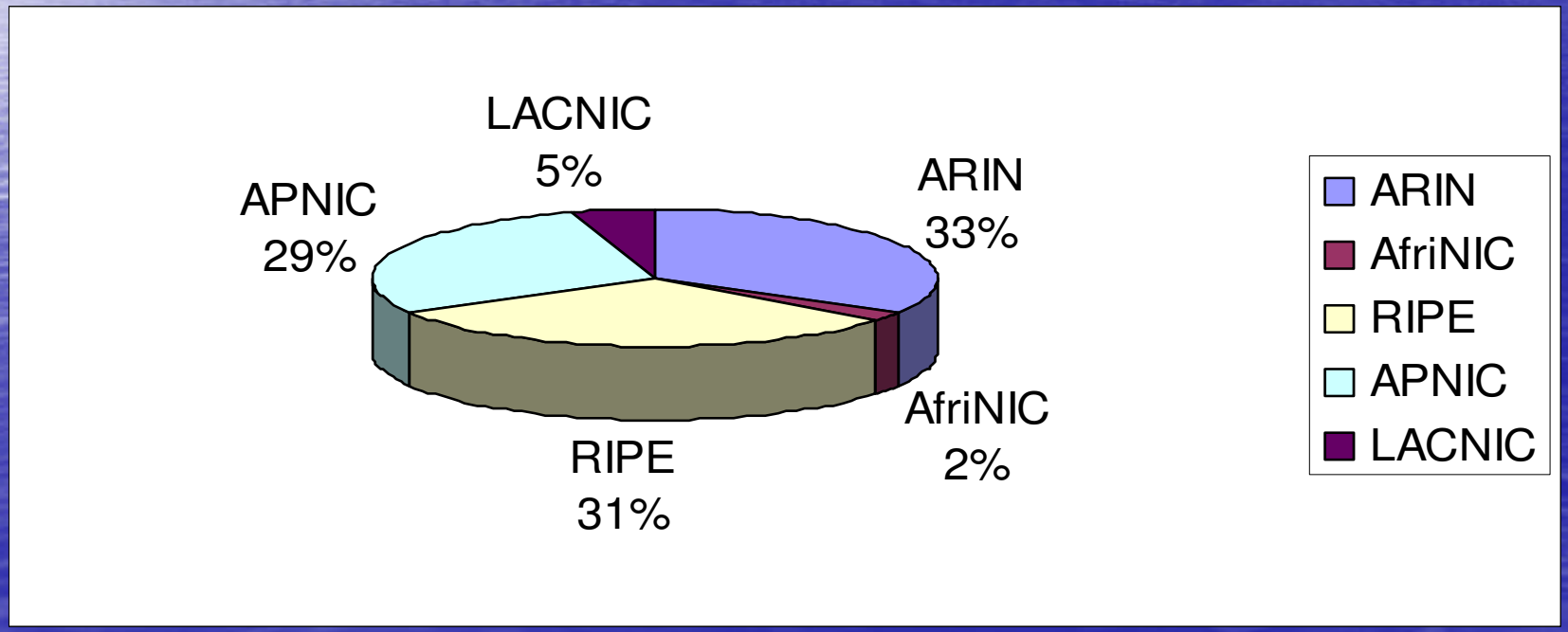
IPv4 Allocation Policy to RIR

- IANA current allocation policy.

http://www.icann.org/general/allocation-IPv4-rirs.html

- Gentlemen Agreement



Proposed Policy prop051

Incentive:

- IANA free pool for allocation of IPv4 addresses (/8s) is decreasing rapidly.
- Bringing certainty to each RIR that they will receive a last IPv4 allocation from IANA of equal size.

… prop51 (cont.1)

Policy statement …

Phase 1:

- IANA reserves N (/8) units to each RIR.
- IANA Keeps applying the current allocation policy;
- Until the request for IPv4 from any RIR to IANA will compromise the remaining free pool of IANA according to the following formula:

  X = IPv4 /8 units available before the last request.

  A = /8 units needed to fulfill the last request from an RIR.

  R = Number of RIRs recognized by ICANN.

  if R * N < = (X - A) ----------> Threshold value
- At this point phase 2 of the policy will be initiated…

… prop51 (cont.2)

Phase 2:

- IANA automatically allocate the reserved IPv4 allocation (N) units to each RIR;
- And respond to the last request with the remaining available allocation units in IANA pool (M units).

… prop51 (cont.3)

Calculation of the remaining M units

- Assignment for each RIR = Reserved N (/8) units
- Remaining M units = Available (/8) IPv4 units before last request – N * R
- Total assigned (/8) units for the last requesting RIR = N + M

N Value ?

After the discussion that took place on the mailing-list we are suggesting N=2.

Why N = 2 ?

- Today IANA allocates 2 /8 as according to the gentlemen agreement to any requesting RIR, so the proposed allocation will have the same size as the today allocations.
- With 2 /8 each RIR will have an allocation size big enough to enable developing of more conservative LIR allocation policies.
- With N=2 we can say that we are not boosting RIR shopping. It is not a big enough pool.

Quick Example:

Assume the remaining free pool for IANA = 11

And an RIR requests for 2 (/8) IPv4 ;

Then IANA will allocate N for each RIR

And in addition allocate M=1 to the last requesting RIR

So the total (/8) allocated for that RIR = 2 + 1

Proposal Advantages

- It allows each RIR to guarantee its last allocation units so that each RIR community can develop its own mechanism/policy for making use of the last IPv4 allocation.
- Equal allocation of the final (/8) blocks across RIRs brings certainty that all RIRs will have a final allocation from IANA.
- Limits RIR shopping.

Proposal Advantages

- Reduce pressure on IANA central pool.
- Allows for suitable time for LIRs to begin their transition phase to the next IP generation (IPv6)
- Provide real IPv4 for new-comers/ new projects to avoid using NAT at the beginning (as many applications encountered problems while using NAT)

Proposal Status

- AfriNIC: submitted in July-2007 and open for discussion till the next meeting in SA.
- APNIC: submitted and discussed on mailing list & now in the f2f meting.
- ARIN: submitted in July-2007 to AC for initial review.
- LACNIC: It had consensus and has been approved in LACNIC X meeting
- RIPE: submitted in July-2007 and open for discussion.

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Thank You

Q & A