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IPv4 Countdown Policy Proposal (2007-03)

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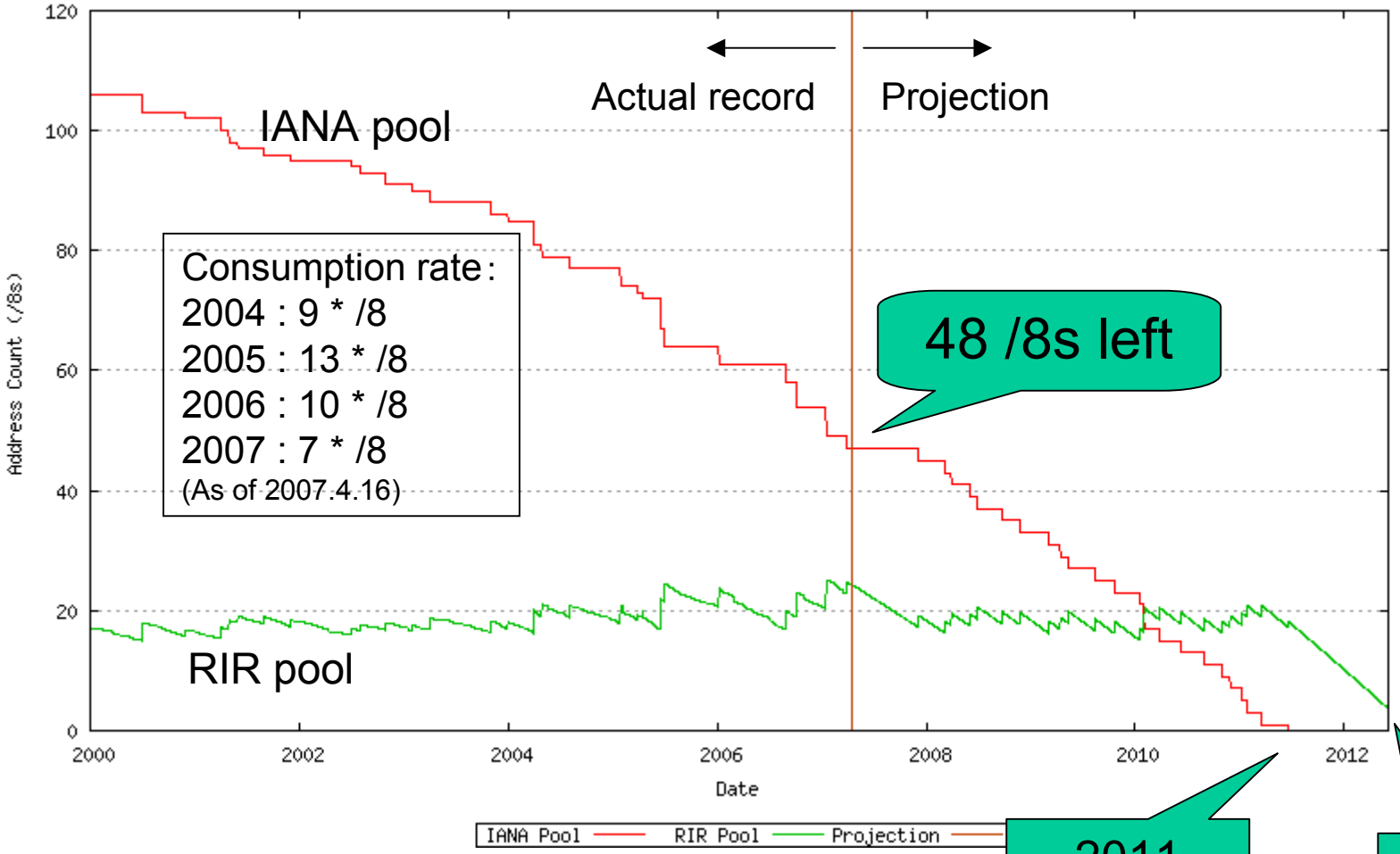
Introduction

- This proposal is :
  - to respond in an orderly way to the upcoming exhaustion of the IPv4 address space.
  - to ensure that LIRs can receive IPv4 address allocation until pre-determined date (T-date).
- This proposal does not :
  - intend to artificially drive up IPv4 addresses
  - promote IPv6

How much IPv4 address left?



Source : Geoff Huston - IPv4 address space report
http://www.potaroo.net/tools/ipv4/

Current Problems

- The final date of IPv4 allocations is ambiguous
  - LIRs do not consider IPv4 address exhaustion as an imminent issue
  - They will face confusions such as re-addressing their network or making subsequent requests at the last minute in within a limited time (last minutes rush)
  - LIRs will be forced to build networks with a big architectural change either with hierarchical NAT or with IPv6, or even with another solution in a very short timeframe

Proposal principles

1. Global Synchronization
2. Set and announce the date when the IPv4 allocation is terminated
3. Not change the current address policy for the extension of IPv4 address lifetime
4. Separate discussions on “recycle” issue

Proposal principles (cont.)

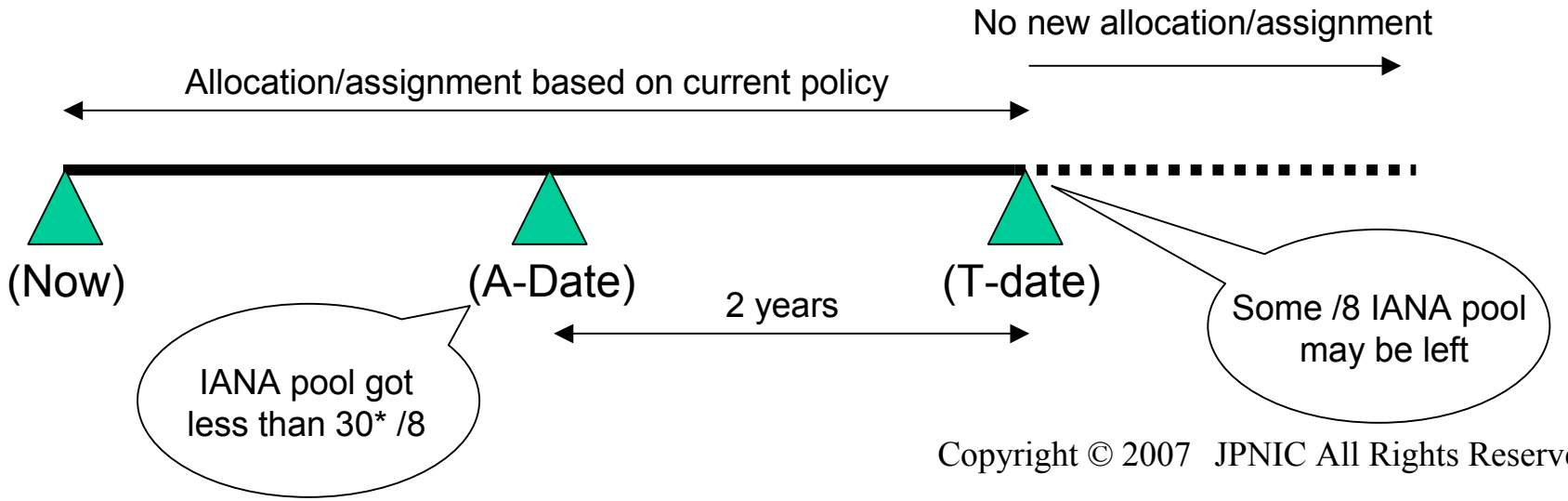
1. Global Synchronization
   - All 5 RIRs should proceed at the same time for measures on IPv4 address exhaustion
   - Ensuring fairness across the regions
   - Prevent confusion such as an attempt to receive allocations from an RIR outside their region
2. Set and announce the date when the IPv4 allocation is terminated
   - To ensure all LIRs/ISPs can receive IPv4 allocation until such date
   - Also, to give time to LIRs/ISPs to prepare for the network re-configuration (Large-scale-NAT, IPv6, or other technical solution)

Proposal principles (cont.)

3. Not change the current address policy for the extension of IPv4 address lifetime
   - Making large changes in the current policy towards conservation is difficult in reality
4. Separate discussions on “recycle” issue
   - Recovery of unused address space is very important and should be addressed, but should not be tied with this proposed policy

Details of the proposal

- Announce the day in which the IANA pool becomes less than 30*/8 (A-Date)
- Terminate new allocation/assignment from RIR on the day (T-Date) exactly 2 years after A-Date



Benefits

- Final date of IPv4 allocation is clearly demonstrated well in advance (2 years)
  - LIRs and users can prepare for the exhaustion (subsequent allocation, renumbering, business plan, IPv6 etc.)
  - RIRs can make the last allocation and avoid causing feelings of unfairness among LIRs

Discussion in APNIC

- Consensus reached:
  - Global Synchronization
  - Not change the current address policy for the extension of IPv4 address lifetime
  - Separate discussions on “recycle” issue
- Consensus NOT reached:
  - Set and announce the date when the IPv4 allocation is terminated
    - Back to ML for further discussion

Discussion in ARIN

- Public Policy Meeting resulted in few in favor(4/93) and many against(47/93)
- Broad comments on this policy…
  - Inappropriate action
    - Artificial measures to move IPv6
    - Anti-trust issue - Denial of Service by the dominant supplier
    - It is enough if Community stays informed of size of remained space
  - Influence by the exhaustion
    - Issue of reclaiming the unused legacy space
    - Emergence of trade market

Questions?