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Public Policy Meeting
ARIN XIX@San Juan, Puerto Rico

IPv4 Countdown Policy Proposal (2007-12)

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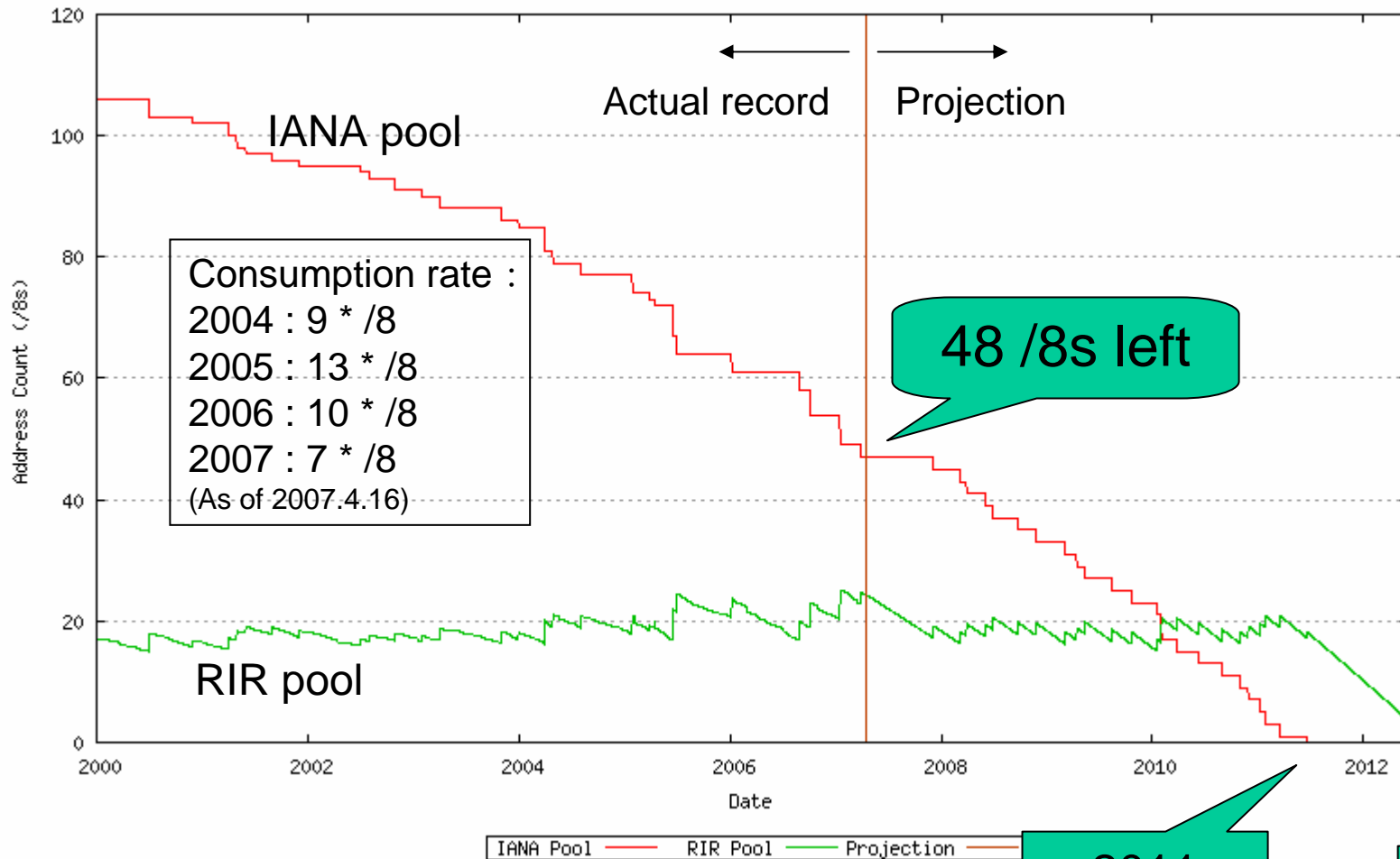


Introduction

- 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/>

2011
June

2012
June



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)



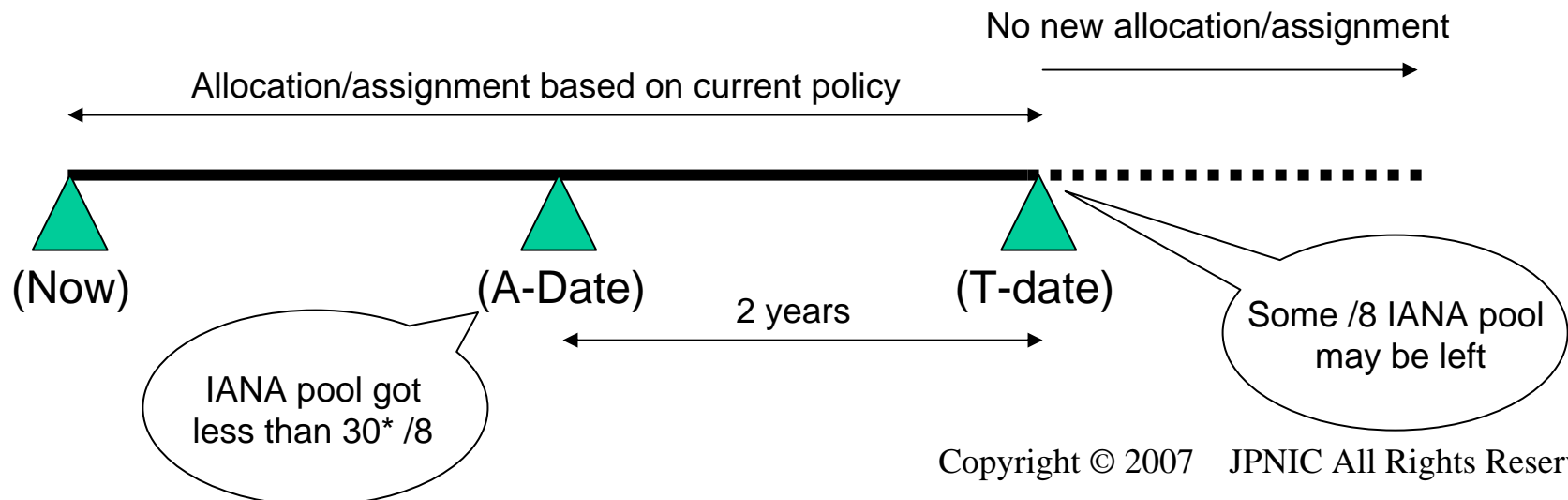
Proposal principles (cont.)

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 Summary

- Comments on this policy...
 - Artificial measures to move IPv6
 - Making IPv4 exhaustion happen faster
 - Should not set cut-off date while IANA/RIR still have IPv4 addresses to allocate
 - Should not reserve the address
 - Should adopt more strict policy
- And further...
 - Reclaiming unused address is essential
 - Should consider IPv4 address trade market creation

Questions?

