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Policy SIG
APNIC 23@Bali, Indonesia

IPv4 Countdown Policy Proposal (prop-046)

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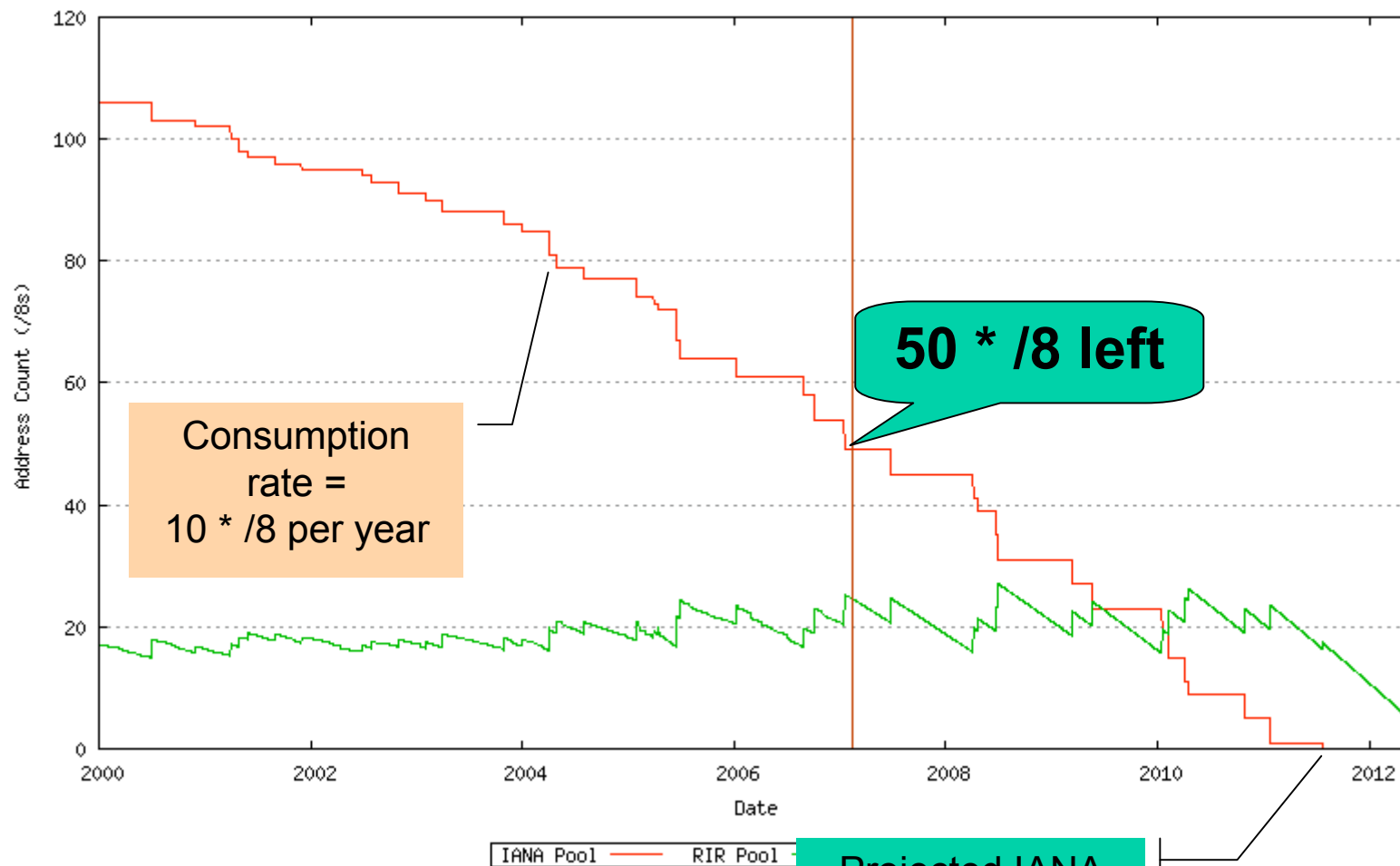


Introduction

- This is the proposal to respond in an orderly way to the upcoming exhaustion of the IPv4 address space.



How much IPv4 address left?



Geoff Huston : IPv4 address space report
<http://www.potaroo.net/tools/ipv4/>



Current Problems

- No specific policy or plan defined to prepare for the IPv4 exhaustion in any RIRs so far
 - 5 years to IPv4 address exhaustion
 - 1-2 year(s) to make global coordinated policy
 - Industry players plan their business/investment for 2-3 years span

Now is the time to start discussion!



Current Problems (cont.)

- The termination date of allocations is ambiguous
 - LIRs do not consider IPv4 address exhaustion as an imminent issue
 - LIRs are likely to face with confusions such as re-addressing their network, or rush for the subsequent allocation request at the last minute within a limited timeframe
 - Some end users may be left behind to prepare for IPv6 ready network



Proposal principles

1. Global Synchronization
2. Some blocks to be left
3. Keeping current practices until the last moment (allocation)
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. Some Blocks to be left

- Keep a few /8 stocks instead of distributing all
- Define the date to terminate the new allocation
- Blocks left will be used for ‘critical infrastructure’ such as IPv4/IPv6 translator
 - Policy to handle such cases should be proposed and discussed separately



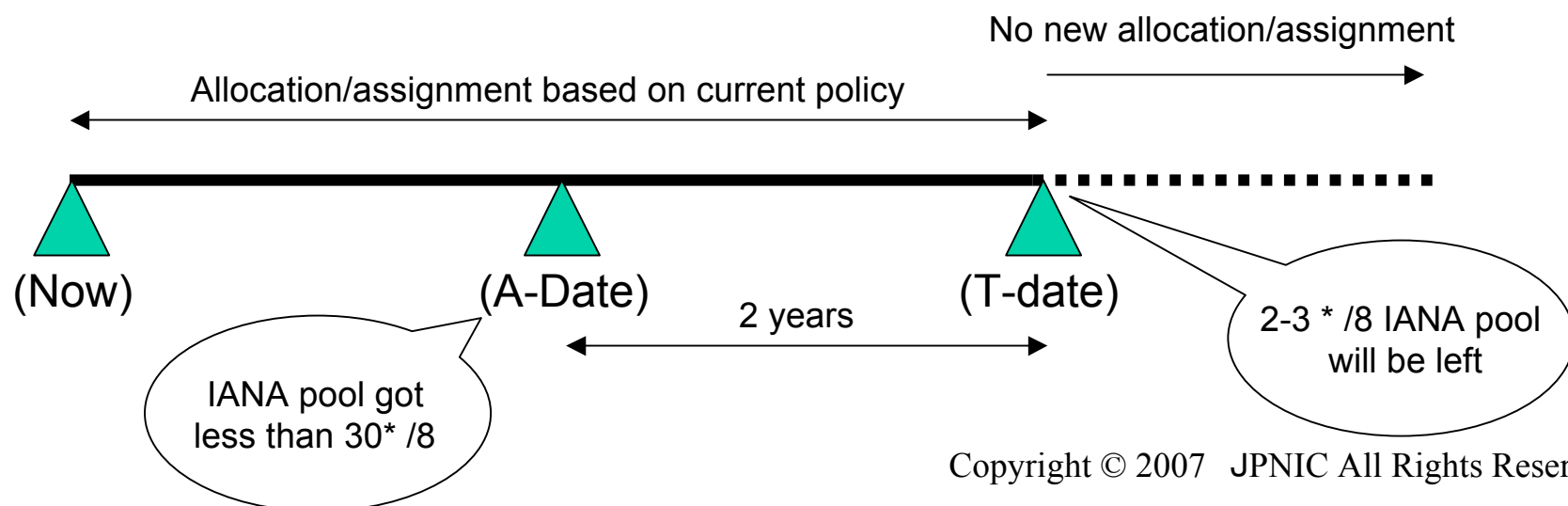
Proposal principles (cont.)

3. Keeping current practices until the last moment (allocation)
 - 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 allocations is clearly demonstrated well in advance of it (namely 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



Implementation Schedule

- This policy proposal requires global implementation, so not implemented until all 5 RIRs adopt this policy proposal
- If this policy is implemented, NIRs should also terminate allocations to its LIRs in line with APNIC



Summary

- 4 Proposal principles
 - Global Synchronization
 - Some blocks to be left
 - Keeping current practices until the last moment (allocation)
 - Separate discussions on “recycle” issue
- Detail of the proposal
 - Terminate new IPv4 allocation ‘2 years’ after the date in which IANA pool got less than ‘30 * /8’.



Questions?

