

ARINXX  
Oct 2007 Albuquerque

# End Policy for IANA to RIR Allocation

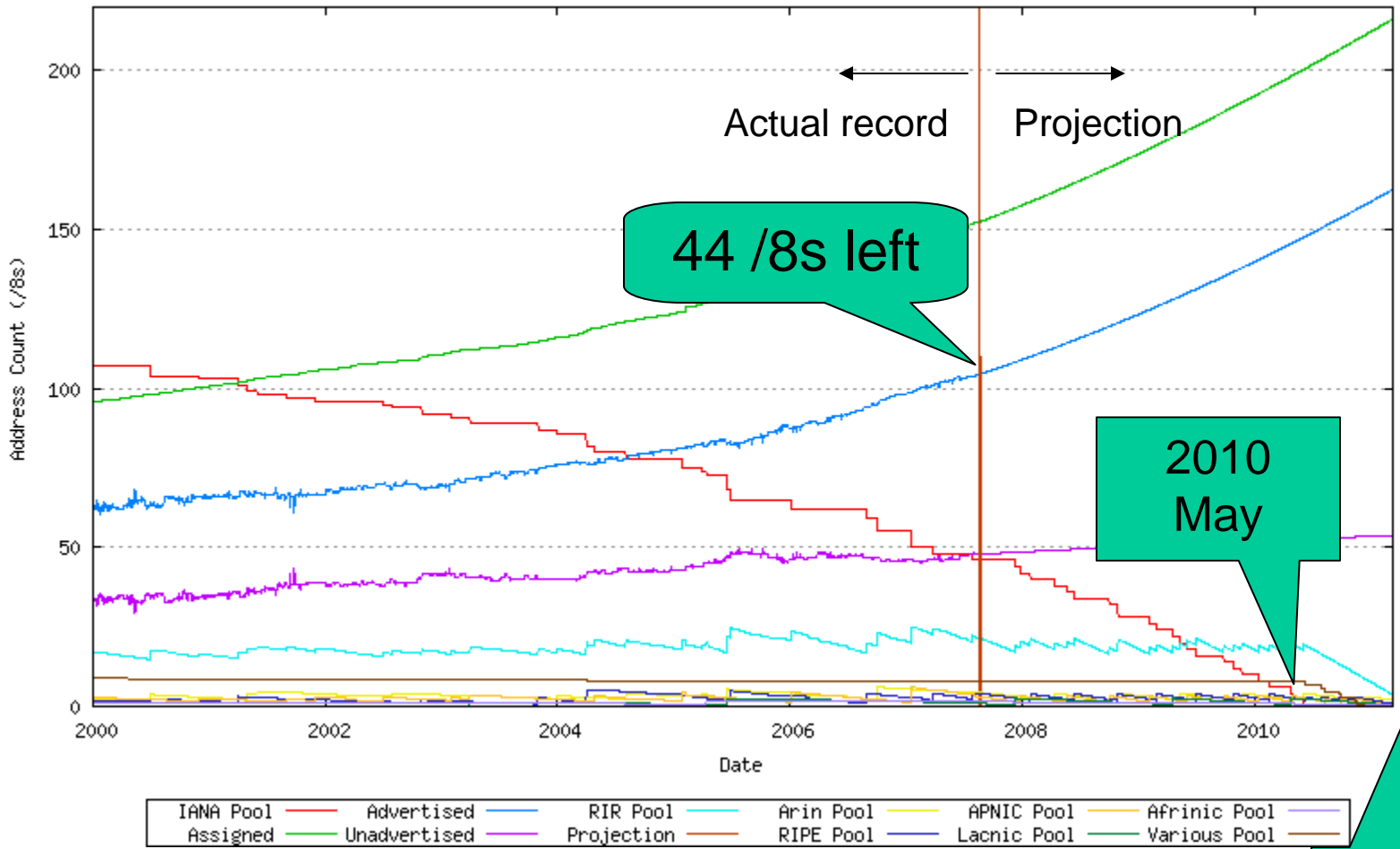
- Japan Network Information Center
- Izumi Okutani

# Introduction

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- This policy defines distribution of last pieces of IANA IPv4 address to RIRs

# How much IPv4 address left?



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

2011  
Feb



# Issues

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Both issues are important, but we'd first like to focus here !

## ❑ Before IANA/RIR pool runs out

- Minimize confusion on distribution of last pieces of IPv4 address

## ❑ After IANA/RIR pool runs out

- Minimize confusion on management of distributed IPv4 address

# Current Problem

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- ❑ No clear agreement on distribution of the last pieces of IPv4 address space
  - No explicit decision made whether to continue with the current scheme or implement other forms of distribution for last pieces
  
- ❑ Difficult for RIRs to plan distribution of last IPv4 blocks in their respective regions
  - IANA allocations of the last pieces depends on the timing of each RIR's request, i.e., remain uncertain until the last minute
  - if RIRs wish to use some of their /8s for a special purpose, don't know how far to distribute it for LIR allocations
  
- ❑ No official information for the communities on remaining IANA/each RIR's IPv4 address

# Necessary Measures

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- Clearly define distribution of the last piece
- Reduce the last minute surprise
- Keep the community well informed

# Proposal

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1. Distribute the last pieces of IANA pool equally to each RIR
  - Distribute a single /8 to each RIR at the point when new IANA free pool hits 5 \*/8
  - This date is defined as "IANA Exhaustion Date"(IED)

withdraw  
this

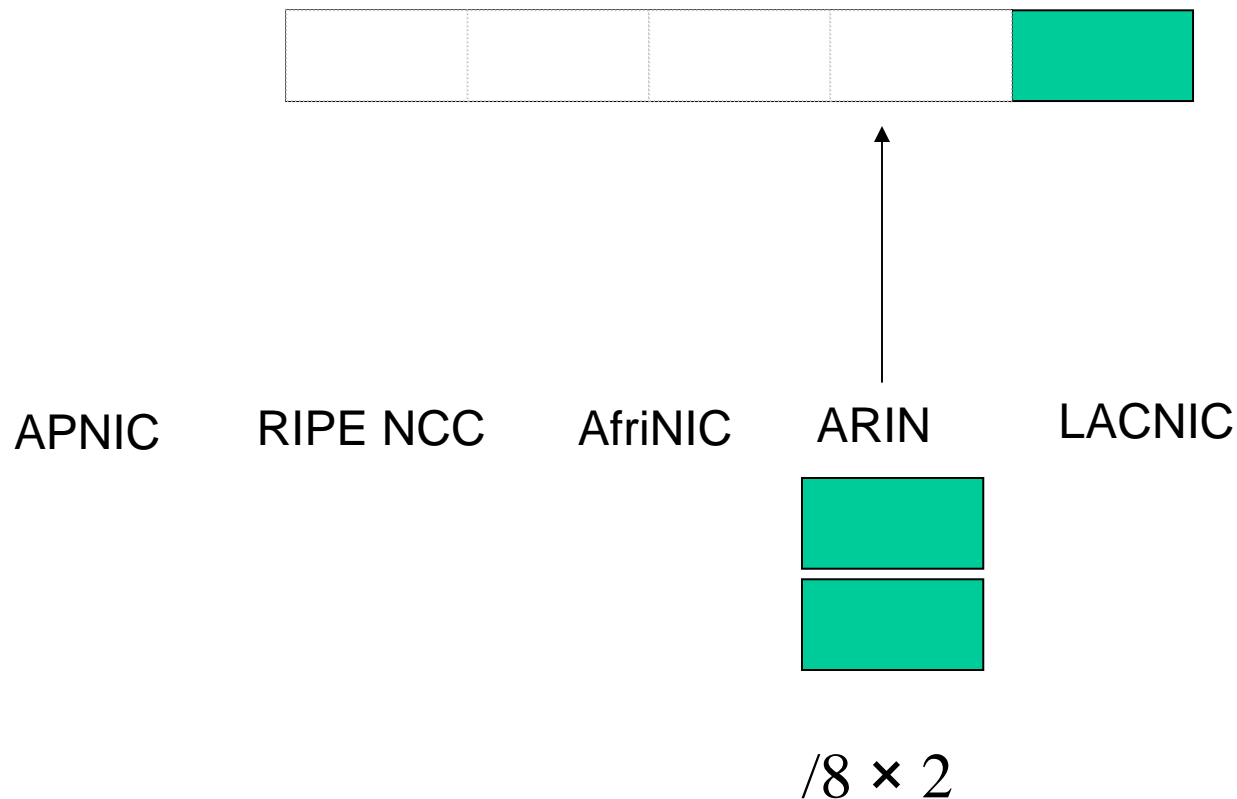
~~2. RIRs should maintain the current address distribution criteria until IED~~

3. It should be completely left up to each RIR communities to define a regional policy after IED

4. RIRs should provide an official projection of IED
  - through websites, at Policy Meetings and other effective means

# Applying no policy change: Case 1

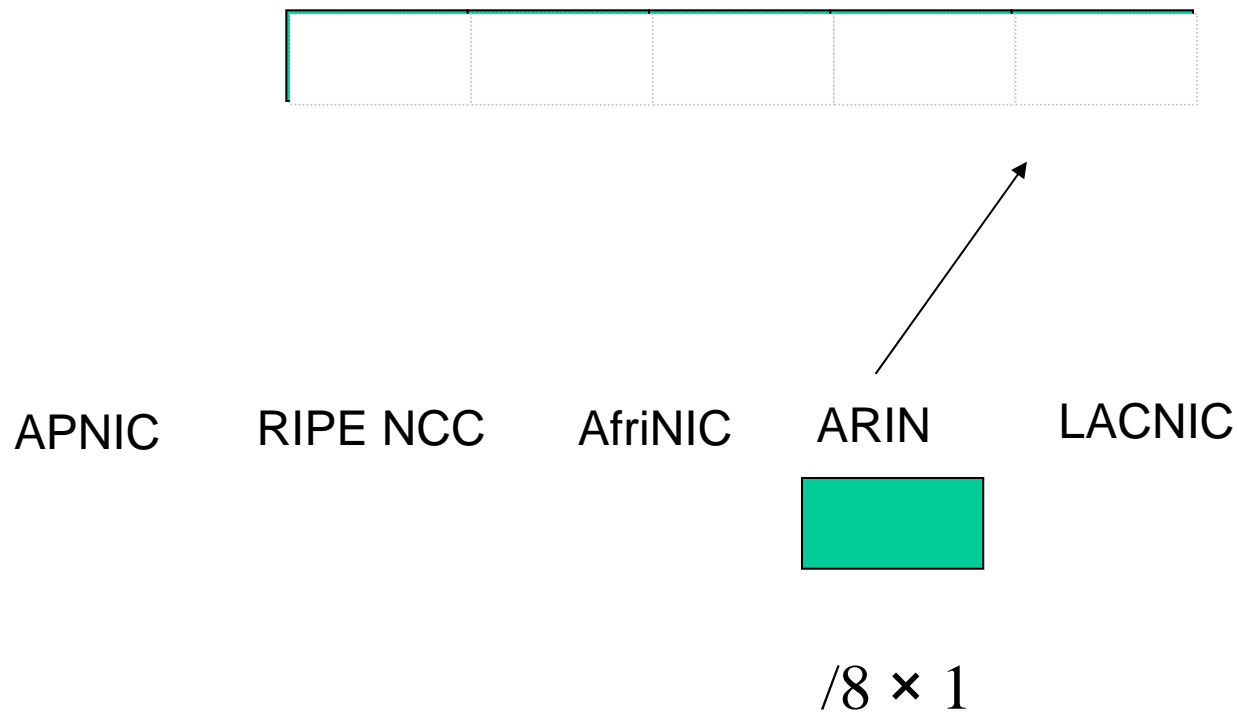
ARIN requests for 2 \*/8 and receives an allocation as requested





# Applying no policy change: Case 2

ARIN requests for 2 \*/8 and receives a part of the requested allocation



# Applying no policy change: Case 3

ARIN requests for 2 \*/8 but cannot receive an allocation as requested



# Applying no policy change: Effect on ARIN community in general

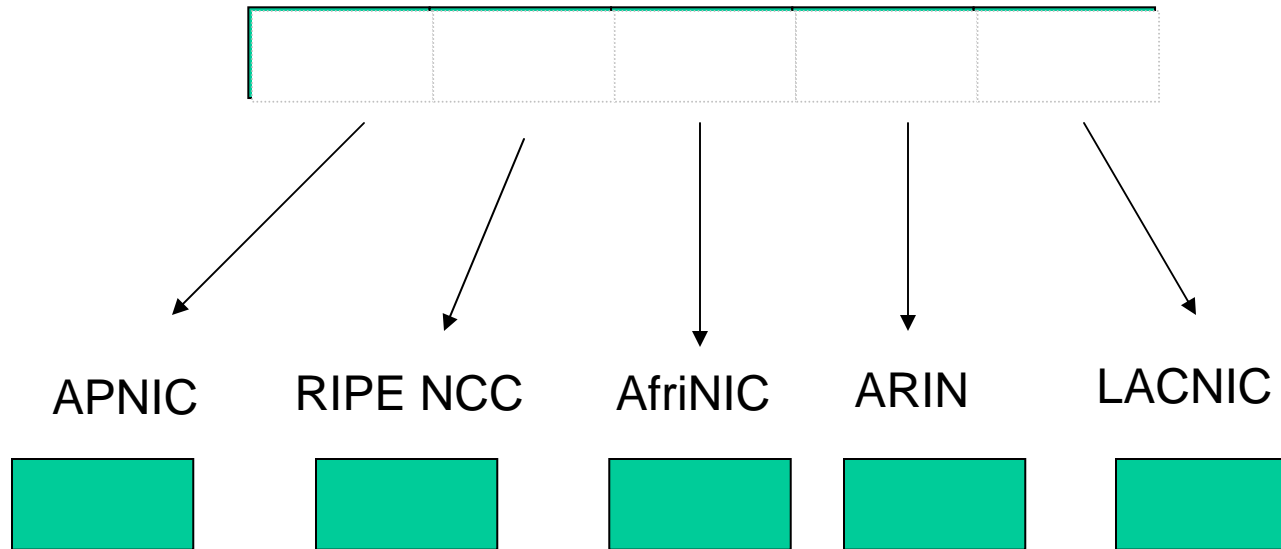
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- Size of remaining pool can vary from 0 to  $<2^{*}/8$
- More difficult for the communities to know what to expect if remaining RIR pool remains uncertain until the last minute

# Applying this proposal

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Each RIR will receive 1 \*/8 each



# Applying this proposal

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- ❑ Each RIR will know the size of IANA pool they can expect to receive at the end
- ❑ Help address planning of the remaining last blocks for each RIR region

# Impact on address planning for RIRs

## Applying No Policy

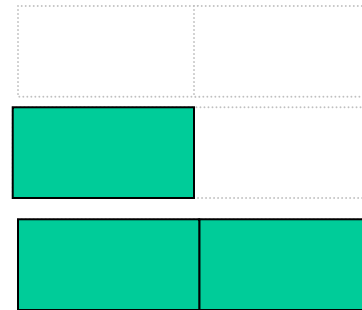
RIR's current free pool



size x

+

RIR's additional free pool



+ 0\*/8?

+ 1\*/8?

+ 2\*/8?

## Applying This Policy

RIR's current free pool



size x

+

RIR's additional free pool



# Q&A

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