

Prop-104-v002:  
Clarifying demonstrated needs  
requirement in IPv4 transfer policy

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APNIC34, 30 August 2012, Phnum Penh

# Introduction

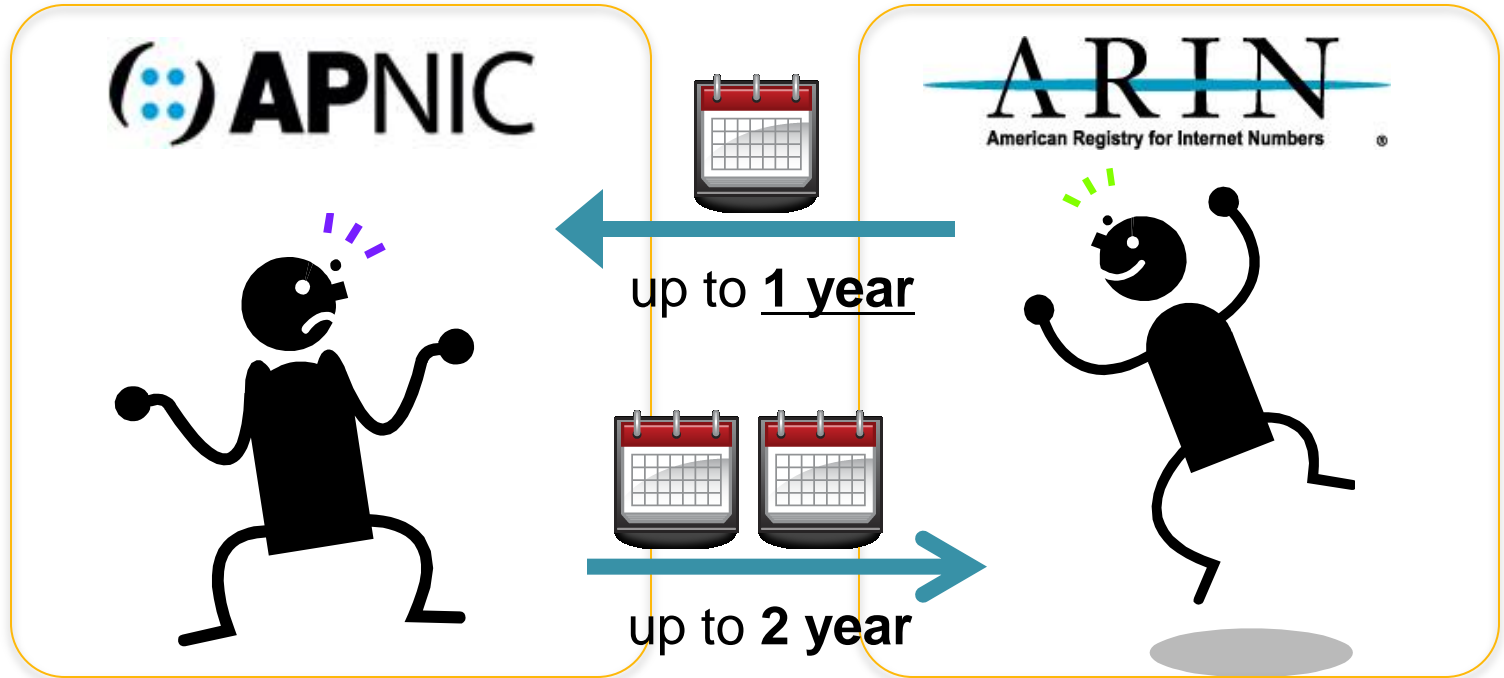
- Background
  - Since prop-096 has been adapted, demonstrated needs is a requirement to recipients of IPv4 transfers .
  - The period of demonstrated needs under the current operational practice is 12 months.
- Proposal
  - Clarifies the requirement on a **period approved for the transferred resource to recipients of IPv4 transfers** based on the demonstrated needs, and defines its period as "**24 months**".

# Current problem (1/3)

- **12 months is too short for a network planning.**
  - Many xSPs plan their service and their addressing requirements beyond one year.
  - Increases uncertainty of address availability.
  - Contract documentation, cost for legal advice and lot of paperwork are needed for transaction.
- The current policy was designed **for new allocation from APNIC IPv4 address pool.**
  - Current policy implies that recipient could obtain continuous allocation. **But free IPv4 address pool has already run out.**
  - No more further allocation will be made expect for last /8 block.

## Current problem (2/3)

# Unequal conditions on Inter-RIR transfer



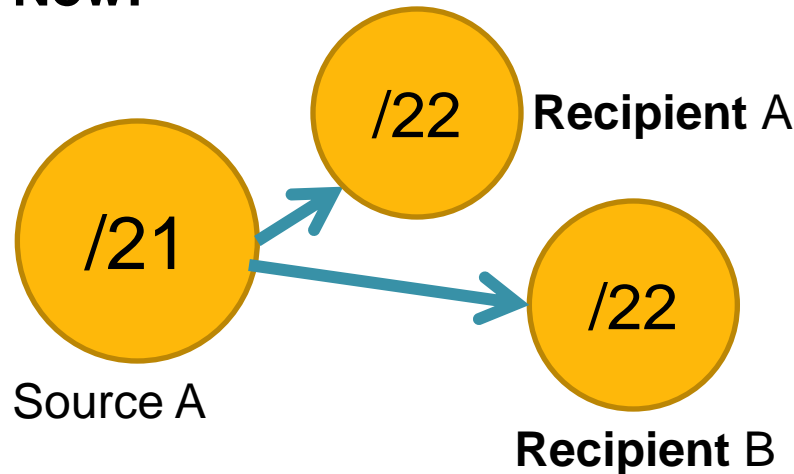
- ARIN allows transfers based on demonstrated needs up to 24 months. On the other hand, current interpretation of APNIC policy allows for only up to 12 months.
  - Note: Inter-RIR transfer policy is implemented in APNIC and ARIN.
- This difference is creating **unequal conditions to APNIC members.**

Current problem (3/3)

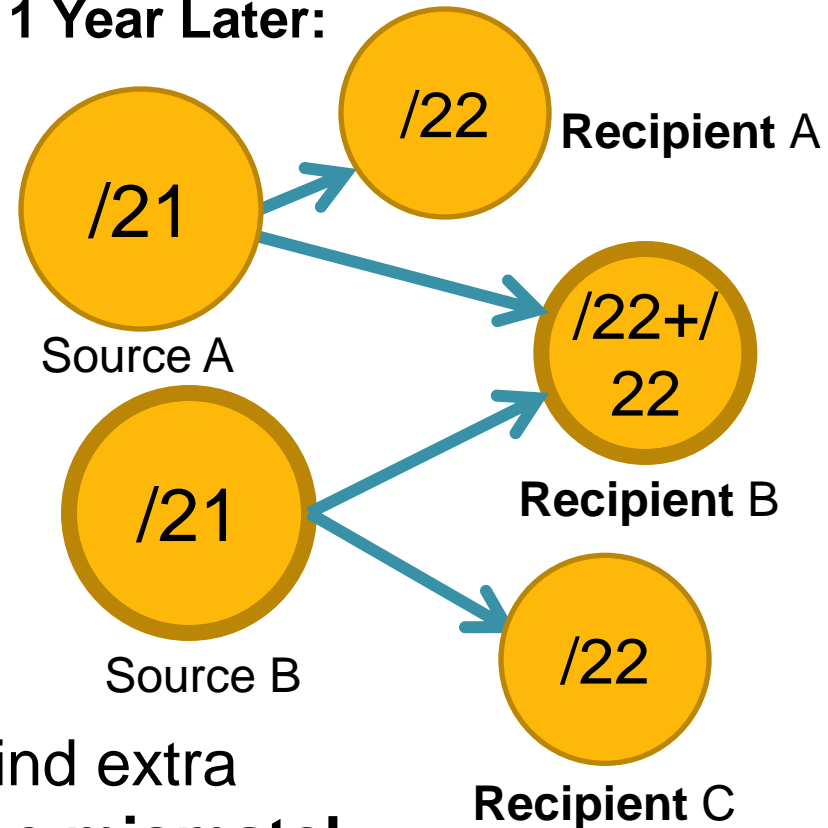
## Unnecessary route fragmentation

Ex: If recipient B needs /22 within one year, and /21 within two years...

Now:



1 Year Later:



- A source may be forced to find extra recipient due to **transfer size mismatch**.
- A recipient needs to find another source after 1 year due to insufficient allowance of transfer size.

# Situation in Other RIRs (1/2)

- AfriNIC
  - AfriNIC currently does not have an IPv4 address transfers policy.
- ARIN
  - ARIN policy has a clear period for justification for IPv4 address transfers, and the period is **24 months**.
    - "Such transferred number resources may only be received under RSA by organizations that are within the ARIN region and can demonstrate the need for such resources in the amount which they can justify under current ARIN policies showing how the addresses will be utilized within 24 months."  
Section 8.3, "Transfers to Specified Recipients" in the "ARIN Number Resource Policy Manual":
- LACNIC
  - LACNIC policy defines to evaluate for 12 months needs for the recipient of the IPv4 address transfer. However, the transfer will only be activate once LACNIC's address pool runs out. (expect for the reserved space)
    - Section 2.3.2.13, "Submission of Assignment Information" and Section 2.3.2.18.2, "Transfer of IPv4 Blocks within the LACNIC Region" in the LACNIC Policy Manual (v1.9):
  - LANNIC have not an Inter-RIR transfer policy at this moment.

# Situation in Other RIRs (2/2)

- RIPE/NCC

- In the RIPE region, the period of needs approved for IPv4 address transfers will be based on the definition of the current allocation policy, which is **3 months**.
- Currently, there is no policy which defines the period of needs based justification, specifically for IPv4 transfers, separate from allocation criteria.
  - Section 5.0, "Policies and Guidelines for Allocations" in the RIPE-553, "IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region:"
- However, there is a policy **proposal under discussions** which proposes to extend the period of the demonstrated needs in case of IPv4 transfers, **up to 24 months**.
  - 2012-03, "Intra-RIR Transfer Policy Proposal"
  - <http://www.ripe.net/ripe/policies/proposals/2012-03>

# Proposal

- Outline

- This proposal clarifies the requirement on a period approved for the transferred resource to recipients of IPv4 transfers based on the demonstrated needs, and defines its period as **"24 months"**.
- This change affect only IPv4 address transfers. 12 months requirements remain for last /8 block.

- Reason

- Demonstrated needs for 12 month is not sufficient is for IPv4 transfers in post IPv4 exhaustion era.
- It is important to ensure APNIC region does not have disadvantaged condition in Inter-RIR transfers

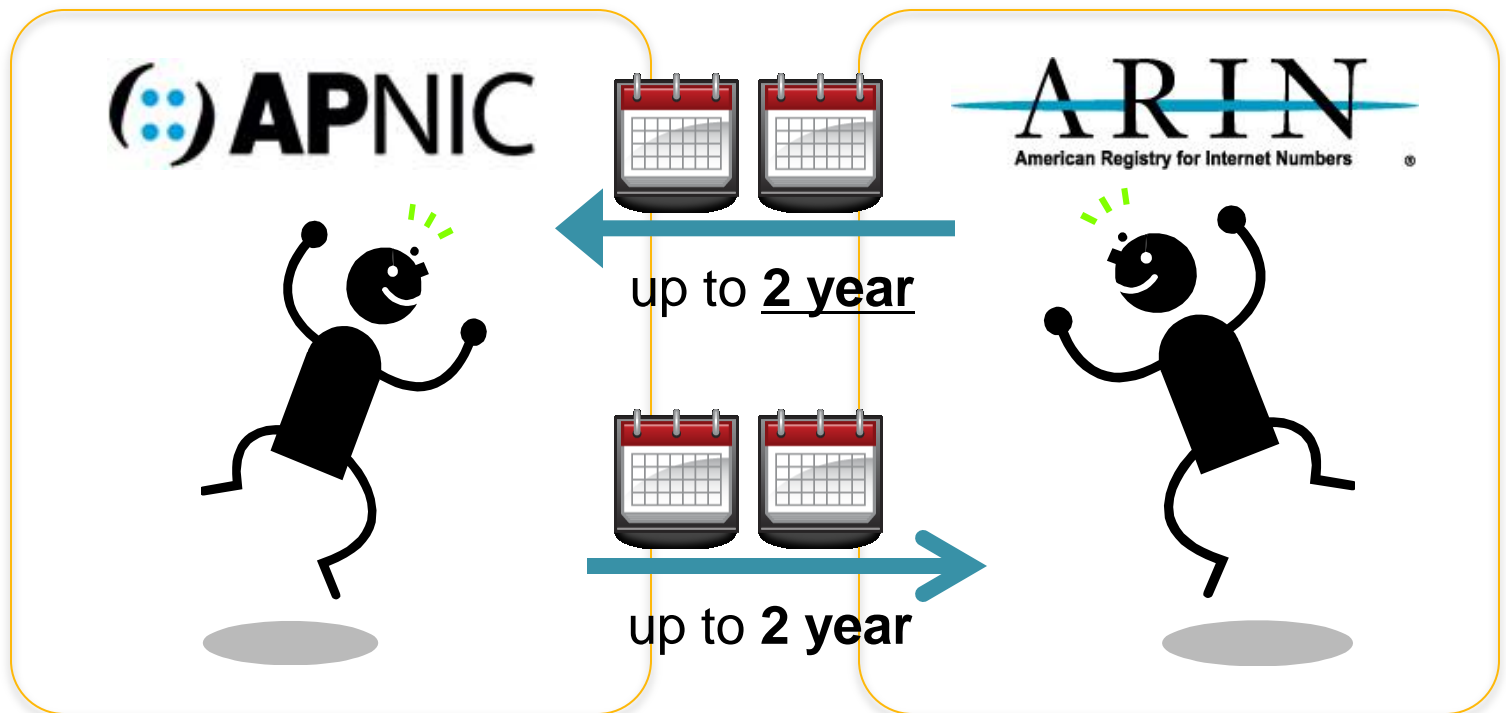


# Why 24 months?

- Follow the current policy on address management at LIR
  - According to “LIR address space management” in APNIC-124, address estimates should be made for
    - Immediately,
    - Within one year, and
    - **Within two years**
- Define a same projection period as an IPv6 network plan.
  - According to “5.2.1 in Initial allocation” in APNIC-089, IPv6 address allocation and assignment policy
  - Have a plan for making at least 200 assignments to other organizations **within two years** OR
  - Be an existing LIR with IPv4 allocations from an APNIC or an NIR, which will make IPv6 assignments or sub-allocations to other organizations and announce the allocation in the inter-domain routing system **within two years**
- In line with ARIN, the only RIR that adopts Inter-RIR transfer policy now.

# Benefits (1/3)

- APNIC member can apply for IPv4 address transfer as a recipient under the same condition of demonstrated needs as other RIRs in case of Inter-RIR transfer.
  - It places APNIC policy in line with ARIN on the transfer conditions.



# Benefits (2/3)

- Extended period will allow the larger block size to match a longer term needs of the requester.
  - It will help to reduce an IPv4 address block fragmentation caused by transfer.
  - It will allow the block size to more closely match the block size available for transfer from source.

## Example:

If recipient B needs /22 within one year, and /21 within two years



- No route deaggregation will be made from the transfer.
- No extra transaction & opportunity cost for the transfer.

# Benefits (3/3)

- Reduce the risk of underground IPv4 address transfers, which do not get registered in APNIC database.
  - There is a possibility that the recipients could not obtain justification for enough IPv4 address by the current period of demonstrated needs.
  - A 24 months justification period decreases uncertainty of the address transfer. It decreases incentives of underground transfer.

# Disadvantages

- We do not see any disadvantages.

# Implementation

- Outline proposed timeframe to implement the decision
  - 3 month from consensus.
- Identify documents, forms that will need to be changed
  - APNIC-123  
<http://www.apnic.net/policy/transfer-policy>  
or  
APNIC-124  
<http://www.apnic.net/policy/add-manage-policy>
  - Pre-approval for IPv4 transfers
    - <https://www.apnic.net/services/become-a-member/manage-your-membership/pre-approval>
    - “Resource -> Transfer pre-approval” form in MyAPNIC
- Identify any impact to NIRs
  - It is the NIR's choice as to whether to adopt this policy.

# Summary

- We propose the new criteria for demonstrated needs up to 24 months for the transferred resource to recipients of IPv4 transfers.
  - In line with other RIR policy in case of Inter-RIR transfer. APNIC member could enjoy equal condition as a recipient on Inter-RIR transfers.
  - Recipient could obtain larger address block on one transaction. It will **help to route aggregation** on transfer, **reduce transaction cost** on IPv4 address transfer.
  - **Reduce the risk of underground IPv4 address transfers**, which do not get registered in APNIC database.



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