



Making ARIN Policy Work for Network Operators

Alyssa Moore
ARIN Advisory Council
alyssa@alyssamoore.ca

Introduction

Hi!

Why?

 **ARIN Advisory Council member**

 Sr. Policy & Advocacy Advisor @
Canadian Internet Registration
Authority (CIRA)

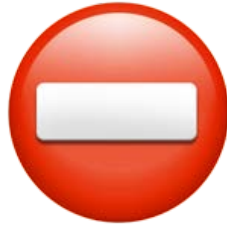
 Internet Society Canada Chapter
BoD

 Montreal Internet Exchange BoD

- Change in ARIN's focus and policy queue
 - IPv4 exhaustion
 - Transfer market
 - Database cleanup



What This Is and Isn't



- We are not trying to get feedback on the language of the policy.
- We are not trying to gather support for specific policies



- We DO want to know if the general concepts are sound and desired by your community
- We DO want to know if you are unduly impacted
- We DO want to provide different ways of getting your feedback

Agenda

1. **Policy response to IPv4 address fraud**
2. **How new policies affect operators**
3. **Database cleanup efforts**
4. **Discussion**



Under Discussion

IPv4 Waiting List

- Micfo fraud
- Advisory Council policy response:
 - Limit of a /22
 - An organization may not be added to the waiting list if it already holds IPv4 resources amounting in aggregate to more than a /20
 - 60 month hold period
 - *This effectively limits the waitlist to small operators and newcomers.*

Recently Implemented

So far in 2019...

- **2018-1: Allow Inter-regional ASN Transfers**
- **2018-3: Remove Reallocation Requirements for Residential Market Assignments**



Under Discussion

Transfers and M&A

- 2019-4: **Allow Inter-regional IPv6 Resource Transfers**
- 2019-10: **Inter-RIR M&A**
- 2019-11: **M&A Regional Nexus Exclusion**
- 2019-12: **M&A Legal Jurisdiction Exclusion**



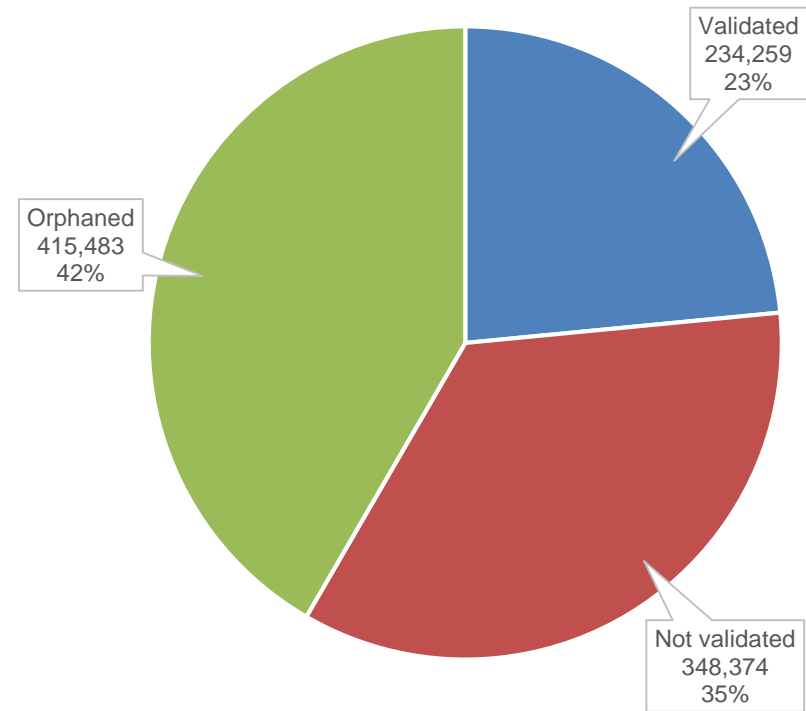
Database Cleanup Efforts

WHOIS contains lots of bad data



Point of Contact Validation Stats

* numbers as of 2019-01-31



Database Cleanup Efforts

Why Good Data is Important

- Internet operability & stability/combating abuse
 - **Helps network operators identify the correct contacts to resolve technical and/or abuse issues**
- Protection from number resource hijacking
 - **Stale, inaccurate data is a target for hijackers**
- Public safety
 - **Used by law enforcement in investigations**
- Contractual requirement
 - **Accurate data is required under ARIN's Registration Service Agreements (RSA/LRSA)**



Database Cleanup Efforts

Causes of Bad Data

- Automated detailed reassignments with invalid data
 - Often, this is automated. Note that simple reassignments are often sufficient.
- Orphaned records
 - Orphaned POC – not associated with any number resources or valid ORGs
 - Orphaned ORG – not associated with any number resources
- “Black-ops” transfers (plz don’t)



Database Cleanup Efforts

Current proposals related to WHOIS Accuracy

- **2018-5: Disallow third-party organization record creation**
 - *Could break automation that expects to immediately create 3rd party Org IDs for downstream customers*
- **2018-6: Clarify Reassignment Requirements in 4.2.3.7.1**
 - *Could break automation that expects to create detailed records for all reassignments*
- **2019-5: Validation of Abuse-mailbox**
 - *Twice per year validation required could affect automation*

Database Cleanup Efforts

NEW &
IMPROVED!

How Operators Validate POCs in the Registry



ARIN sends an **annual email notification** to POCs for:

- Admin
- Tech
- NOC
- Abuse



Each POC has up to **60 days** to confirm their Whois contact information is correct and complete, or to submit new data.



POCs may validate their information by:

- Clicking the hyperlink
- Sending an email
- Logging into ARIN Online



*

If after careful analysis, ARIN staff deems a POC to be completely and permanently abandoned or otherwise illegitimate, the POC record shall be marked invalid in Whois.

**An invalid POC is restricted to payment and contact update functionality within ARIN Online. As a result, an org without any valid POCs will be unable to access further functionalities within ARIN Online until at least one Admin or Tech POC validates their information is correct.*

POC Validation Email

Hello,

The American Registry for Internet Numbers (ARIN) is a non-profit Internet number registry for the U.S., Canada, and parts of the Caribbean.

You are receiving this message for one of these reasons:

* Your Internet service provider has registered you as a Point of Contact (POC) for your organization's IP addresses shown in ARIN's Whois, which is the public registry of IP addresses issued in this region.

OR

* You have obtained IP addresses and/or Autonomous System Numbers (ASNs) directly from ARIN.

We ask each POC to verify their information as part of ARIN's annual validation process. Validating your POCs helps us to maintain an accurate registry. Your POC information is shown below.

Name: POC Name
Handle: POCHANDLE-ARIN
Company: ARIN
Address: PO Box 232290
City: Centreville
StateProv: VA
PostalCode: 20120
Country: US
RegDate: 2018-05-31
Updated: 2018-05-31
Phone: +1-703-227-0660 (Office)
Email: hostmaster@arin.net

IF YOUR POC INFORMATION IS ACCURATE, please confirm by doing ONE of the following:

* Reply to this email and include the word "CORRECT" in the SUBJECT of the email. Note that any information or questions included in a reply will be ignored if the subject includes the word "CORRECT."

OR

* Copy and paste the following URL into your web browser:
<https://account.arin.net/public/secure/poc/validate/-/VALIDATION-CODE->

IF YOUR POC INFORMATION IS NOT ACCURATE, you can update your POC information using ARIN Online.

TO GET MORE INFORMATION about ARIN Online accounts, visit the following URL:

<https://www.arin.net/resources/guide/account/>

TO GET MORE INFORMATION on updating your POC, visit the following URL:

<https://www.arin.net/resources/guide/account/records/poc/>

FOR ADDITIONAL ASSISTANCE, you can:

* Submit an Ask ARIN request through your ARIN Online account

OR

* Call ARIN's Registration Services Help Desk at 703.227.0660 from 7:00 AM to 7:00 PM Eastern Time Monday through Friday

Regards,

Registration Services Department
American Registry for Internet Numbers (ARIN)

Database Cleanup Efforts

POC Notification and Validation Upon Reassignment or Reallocation (Current status: Policy proposal is recommended to the Board for adoption)



Network operator requests a **reallocation** or **detailed reassignment** for a downstream customer.

The receiving org must already be in the ARIN database and associated with at least one validated POC.



ARIN will notify the requester **AND** all POCs associated with the receiving organization whether the request was successful.

If there are no validated POCs associated with the receiving organization, ARIN will reject the request.



ARIN will request validation of any invalid POC objects associated with the receiving org.

Note: Simple reassignments are made without any linkage to an organization or POC objects in the ARIN database.

Discussion

New policy changes affect operators.

- If you use automated tools to create reassignments, new Point of Contact validation procedures may affect your automation processes
- Recent policy changes affect who is eligible to obtain IPv4 resources from the waitlist
- New proposals on the docket may change operators' ability to move resources
- Policy cleanup efforts are designed to make life easier for operators

Feedback reminder...

- **ARIN Meetings**

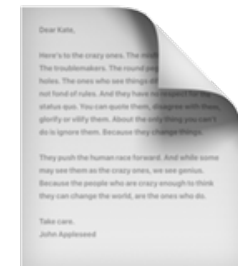
- ARIN 44, Austin
- October 31 - Nov 1 (after NANOG77)

- **Public Policy Mailing List (PPML)**

- arin-ppml@arin.net

- **Policy Proposals Online**

- <https://www.arin.net/policy/proposals>



Thanks!



alyssa@alyssamoore.ca