ARIN 39

NEW ORLEANS | 2-5 APRIL 2017

Newcomer Orientation

Orientation Overview

- Brief introductions
- ARIN and the Internet registry system
- Policy development at a glance
- Proposals under discussion this week
- What's ahead and how to participate
- Q&A

Self-introductions

Your name

Affiliation

Main reason for
attending ARIN 39?

ARIN Overview:
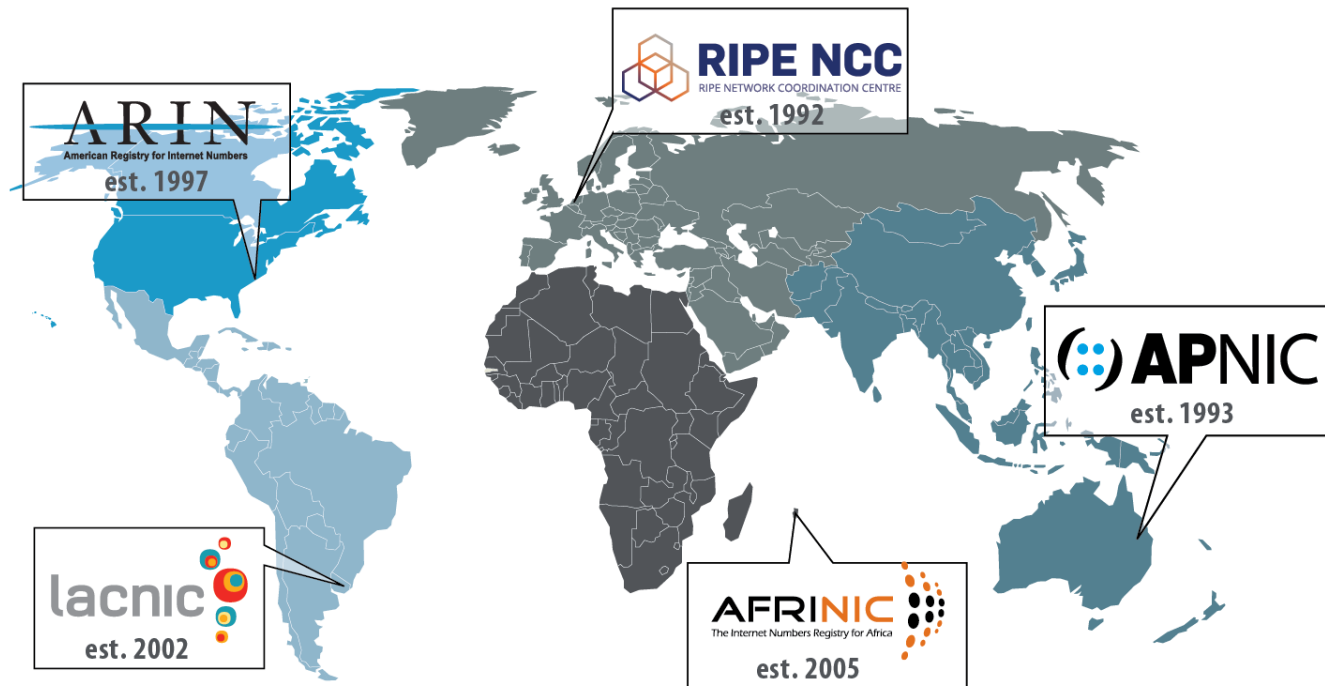# Mission, Role, and Services

John Curran

President and CEO

What is an RIR?

A Regional Internet Registry (RIR) manages the allocation and registration of Internet number resources* in a particular region of the world.

*Internet number resources include IP addresses (IPv4 and IPv6) and autonomous system (AS) numbers.

Regional Internet Registries

What do the RIRs do?

- Manage the distribution of IP addresses and Autonomous System numbers (ASNs)

- Provide reverse DNS and a public Whois database

- Support Internet infrastructure through technical coordination

RIR Structure

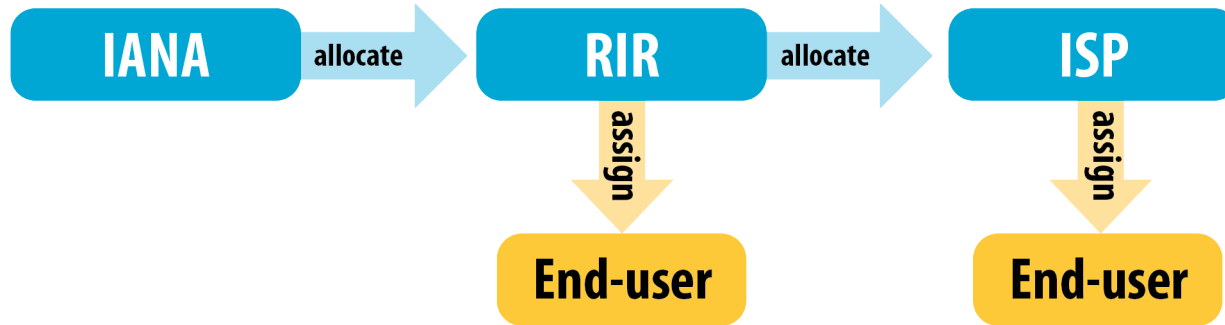**Independent**

Not-for-profit

- Fee for services, not number resources

- 100% community funded

Membership based : Internet service providers (ISPs), telecommunication organizations and large corporations, universities, governments…
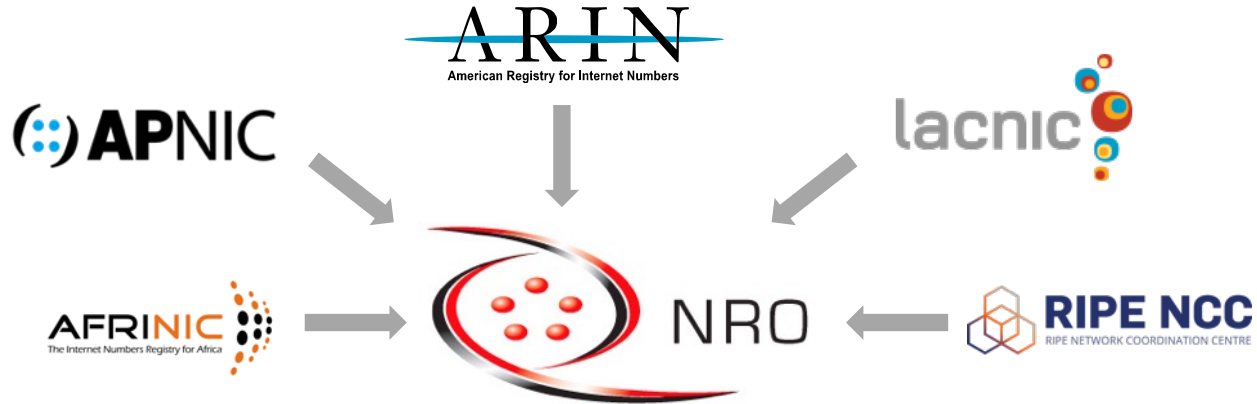
Community "Regulated"

- Community developed policies
- Member-elected governing boards
- Open and transparent

IP Address and Autonomous System Number Provisioning Process

```
IANA  --allocate-->  RIR  --allocate-->  ISP
                      |                    |
                   assign               assign
                      |                    |
                   End-user             End-user
```
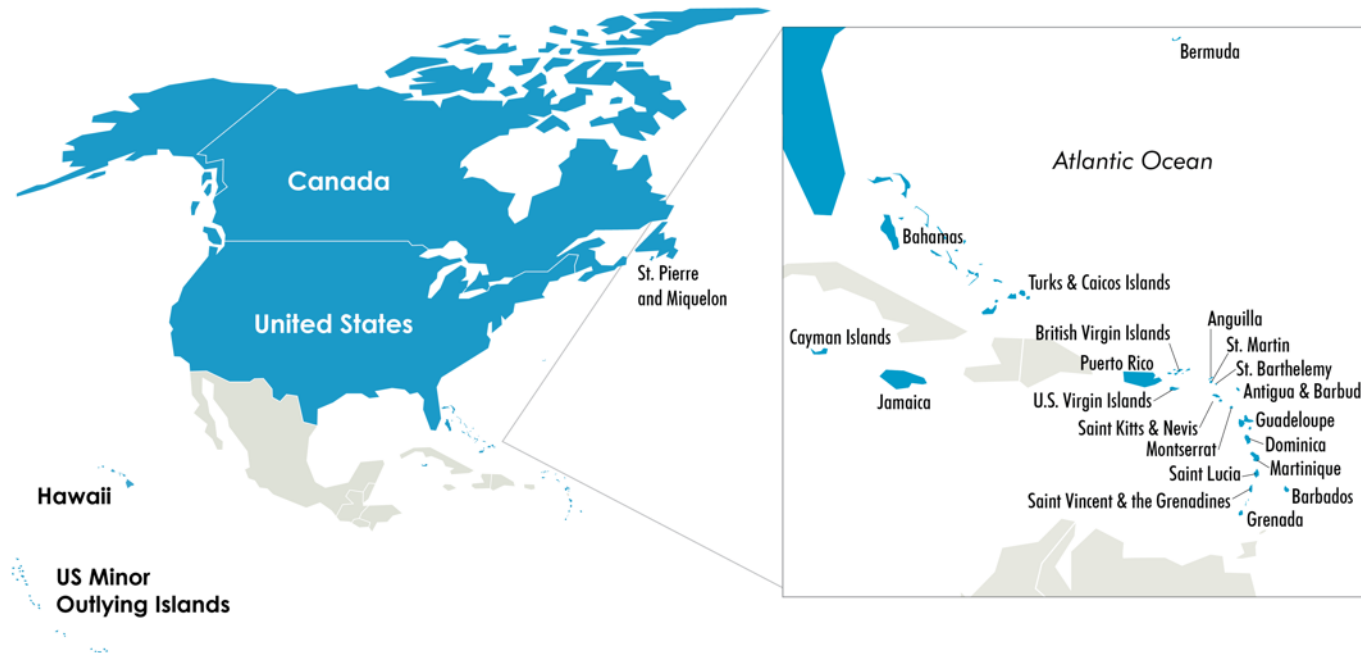
The Number Resource Organization (NRO)

The NRO exists to protect the unallocated number resource pool, to promote and protect the bottom-up policy development process, and to act as a focal point for Internet community input into the RIR system.

https://www.nro.net/

The ARIN Service Region

The ARIN Region includes many Caribbean and North Atlantic islands, Canada, the United States and outlying areas.

ARIN's Mission

ARIN, a nonprofit member-based organization, supports the operation of the Internet by:

- **managing Internet number resources throughout its service region;**

- **coordinating the development of policies by the community for the management of Internet Protocol number resources; and**

- **advancing the Internet through informational outreach.**

Who is the ARIN community?

Anyone with an interest in Internet number resource management in the ARIN region can be part of the ARIN community.

The ARIN community includes…

- 37,000+ organizations served
- 20,000+ customers paying fees for services
- 5,475+ members
- 80+ professional staff

Community-based Leadership

ARIN is governed by individuals who are elected by our membership.

- **7-member Board of Trustees**
  - 6 elected by the membership + the President & CEO who is elected by the Board
  - Maintains authority over the scope, mission, and establishes the strategic direction and fiscal oversight
  - Ability to appoint an additional voting member for diversity
- **15-member Advisory Council**
  - Elected by the membership
  - Serves in an advisory capacity to the Board on Internet number resource policy and related matters; forwards consensus-based policy proposals to the Board for ratification
- **15-member Number Resource Organization Number Council (3 from each RIR)**
  - 2 elected by the ARIN Community/1 appointed by ARIN Board
  - Selections ICANN Board seats 9 and 10
  - Global policy development: IANA to RIRs

Strategic Planning

ARIN performs its mission according to a Strategic Plan.

Updated annually, this plan drives the creation of organizational objectives and the

internal work plan.

ARIN's strategic plan and objectives:

https://www.arin.net/about_us/corp_docs/stratplan-2017-2018.pdf

Sample of 2017 Organization Objectives

- Maintain accountability to membership; perform audits
- Participate in global discussions to maintain the community-based multi-stakeholder policy development model
- Conduct two ARIN Public Policy and Member meetings
- Maintain a strong outreach in the Caribbean
- Support law enforcement efforts consistent with ARIN's mission
- Continue IPv4/IPv6 transition awareness campaign
- Continue to review and enhance online services, including making significant user interface improvements per user feedback and customer survey

ARIN Manages:

- IP address allocations & assignments
- ASN assignment
- Transfers
- Reverse DNS
- Record Maintenance
- Directory service
  - Whois
  - Routing Information (Internet Routing Registry)
  - WhoWas

https://www.arin.net/resources/index.html

ARIN technologies for managing Internet number resources:

- ARIN Online – customer web portal
- DNSSEC - security
- Resource Certification (RPKI)
- Community Software Project Repository
- Whois-RWS
- Whois and Registration Data Access Protocol (RDAP) directory services
- Operational Test and Evaluation Environment

https://www.arin.net/resources/services/

Training and Education

- Educational Materials library
  - **- https://www.arin.net/knowledge**

- Instructional Video Library
  - **http://youtube.com/teamarin**

- In-person Training/Education
  - ARIN on the Road, ARIN + NANOG on the Road, other fora upon request
  - **https://www.arin.net/participate/meetings/on-the-road/**

Outreach and Community Engagement

- Policy Development through Public Policy Meetings and Consultations

- Work closely with the technical community to ensure education, empowerment, engagement

- Collaborate with Caribbean organizations to maximize inclusion

- Engage globally as a key technical resource

- Support cooperation and direct involvement alongside governments and international organizations

Participate in ARIN

Contribute your Opinions and Ideas:

- Public Policy Mailing List

- Attend Public Policy and Members Meetings (remotely or in person), Public Policy Consultations, outreach events

- Share your experiences on our IPv6 Wiki: **https://getipv6.info**

- Be a Get6 Forward Thinker - **http://teamarin.net/get6/forward-thinkers/**

- Submit a suggestion: **https://www.arin.net/public/acsp/index.xhtml**

- Participate in community consultations: **One open now on CKN23-ARIN !**

- Write a Guest Blog: **http://teamarin.net/spread-the-word/guest-blog/**

- Members – Vote in annual elections

Contact members@arin.net or info@arin.net for more information

ARIN Mailing Lists

https://www.arin.net/participate/mailing_lists/index.html

- **ARIN Announce**: Read-only, news about ARIN elections, outreach, meetings, policy updates, training opportunities…
- **ARIN Discussion**: (members only) Discuss ARIN-specific issues such as fee structures and internal policies
- **ARIN Public Policy**: Raise and discuss policy-related ideas and issues surrounding existing and proposed ARIN policies
- **ARIN Consultation**: Voice your opinion on open consultations
- **ARIN Issued**: Read-only, daily report of IPv4, IPv6, and ASNS issued directly by ARIN, and resources returned to ARIN's free pool.
- **ARIN Technical Discussions**: Provide feedback on use of ARIN technical services
- **Suggestions**: Read-only, notice of new suggestions from the community and ARIN responses

Stay Connected on Social Media

www.TeamARIN.net

www.facebook.com/TeamARIN

@TeamARIN *(use #ARIN39 to tweet during this meeting!)*

www.google.com/+TeamARIN

www.linkedin.com/company/ARIN

www.youtube.com/TeamARIN

#ARIN39

Policy Development Process (PDP)

Dan Alexander
Chair, ARIN Advisory Council

Overview

ARIN Advisory Council members

Principles and the Policy Development Process (PDP)

How discussion happens

How to get involved

ARIN Advisory Council

- Dan Alexander, Chair
- Owen DeLong
- Andrew Dul
- David Farmer
- David Huberman
- Alyssa Moore
- Tina Morris, Vice Chair
- Amy Potter

- Joe Provo
- Leif Sawyer
- Robert Seastrom
- John Springer
- Chris Tacit
- Allison Wood
- Chris Woodfield

What do Internet number resource policies do?

ARIN applies policies to manage Internet number resources and certain directory and registry services.

Policies are given effect through the application of business rules and operating procedures.

Where Do I Find These Policies?

The Number Resource Policy Manual (NRPM) is the collection of all ARIN policies, arranged by topic.

Topics include:

- Definitions
- Directory Services
- IPv4
- IPv6
- AS Numbers
- Transfers
- Out of Region Use

https://www.arin.net/policy/nrpm.html

Example of a Policy

NRPM 4.3.1. End-users

• ARIN assigns blocks of IP addresses to end-users who request address space for their internal use in running their own networks, but not for sub-delegation of those addresses outside their organization. End-users must meet the requirements described in these guidelines for justifying the assignment of an address block.

Policy Development Process Principles

Open
- Developed in open forum
  - Public Policy Mailing List (PPML)
  - Public Policy Meetings/Consultations (PPMs/PPCs)
- Anyone can participate

Transparent
- All aspects documented and available on website
  - PDP, meeting information and discussions, and current/draft policy text
  - Advisory Council and Board meeting minutes

Bottom-up
- Policies developed by the community
- Staff implements, but does not make policy

Policy Development Process: Basic Steps

1. Community member submits a <u>Proposal</u>
2. Advisory Council (AC) works with submitter to ensure clear problem statement and suggested policy change
3. AC puts <u>Draft Policy</u> on Public Policy Mailing List (PPML) for community discussion/feedback (possibly presented at Public Policy Consultation or Public Policy Meeting, PPC/PPM)
4. AC decides: continue work or abandon
5. AC recommends fully developed Draft Policy (fair, technically sound, and supported by community) for adoption
6. <u>Recommended Draft Policy</u> presented at PPC/PPM
7. If AC still recommends adoption, then Last Call and review
8. Petition process available throughout all AC actions
9. Board review/ratification
10. Staff implements

Policy discussions at this meeting:

- **Recommended Draft Policy ARIN-2016-3:** Alternative simplified criteria for justifying small IPv4 transfers
- **Recommended Draft Policy ARIN-2016-9:** Streamline Merger & Acquisition Transfers

- **Draft Policy ARIN-2016-8:** Removal of Indirect POC Validation Requirement
- **Draft Policy ARIN-2017-1:** clarify slow start for transfers
- **Draft Policy ARIN-2017-2:** Removal of Community Networks
- **Draft Policy ARIN-2017-3:** UPDATE TO NPRM 3.6: Annual Whois POC Validation

For details, consult the ARIN 39 Discussion Guide

How Policy Discussions Generally Play Out

- AC shepherds present policy text and request feedback from the community
- Microphones open, queues develop
  - **Board of Trustees Chair moderates discussion**
- Microphone queues rotate, including remote participant chat
- Anyone with a position or opinion on a Draft Policy may speak to it, with the exception of RIR staff
  - **Be sure to state your name and affiliation each time you go to the mic!**
- After a reasonable length of discussion time concludes, the Chair will pose one or more questions to the room for a show of hands
  - **This includes remote participants**
- Results are recorded and used by the AC during their deliberations

Proposals at Public Policy Meetings (AC workload)
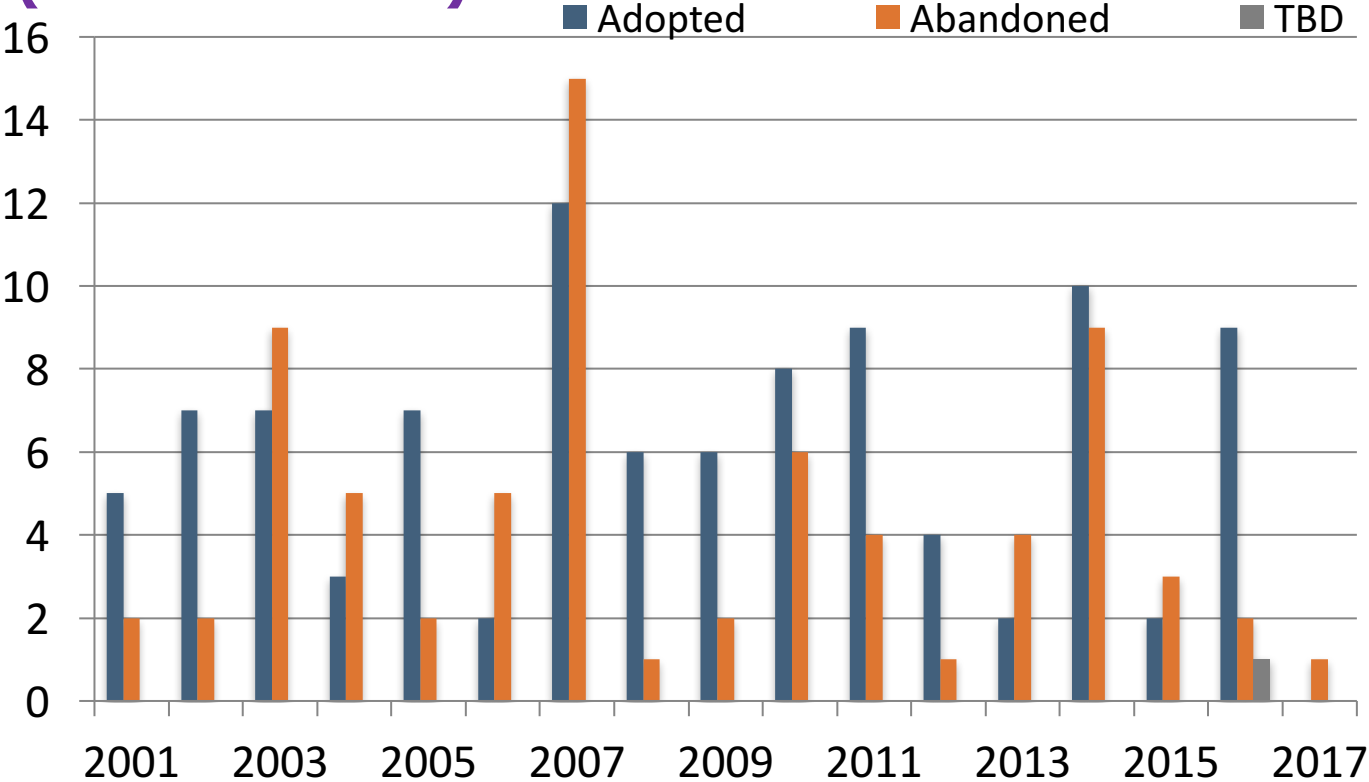
How Can You Get Involved?

Two ways to learn and be heard

1. **Public Policy Mailing List (PPML)**

   http://lists.arin.net/mailman/listinfo/arin-ppml

2. **Public Policy Consultations/Meetings**

   ARIN meetings (April and October)

   ARIN Public Policy Consultations at NANOG (twice a year as needed, February and June)

   Remote participation supported

Take Aways

1. ARIN doesn't create number policy, <u>you</u> do.

2. Well documented PDP includes staff/AC assistance throughout the process.

3. Stay informed. Join the PPML and/or attend meetings (in person or remotely).

References

Policy Development Process (PDP)
   http://www.arin.net/policy/pdp.html

Draft Policies and Proposals
   http://www.arin.net/policy/proposals/index.html

Number Resource Policy Manual (NRPM)
   http://www.arin.net/policy/nrpm.html

What's Ahead This Week

Tonight:

Transfer Process Tutorial   4:15 - 5:15 PM, Royal Salon

Happy Hour   5:30 - 6:30 PM, La Nouvelle Orleans – Mezzanine

Monday:

Breakfast   8:00 - 9:00 AM, La Nouvelle Orleans - Mezzanine

Public Policy Meeting   9:00 AM - 5:00 PM, Queen Anne Ballroom - Mezzanine

Lunch for all attendees   Noon, La Nouvelle Orleans - Mezzanine

Women's Networking Lunch   Noon, Royal B, Ground floor (here)

Social Event   7:00 -11:00 PM, Mardi Gras World

Tuesday:

Breakfast   8:00 - 9:00 AM, La Nouvelle Orleans

Public Policy Meeting   9:00 AM – 5:00 PM, Queen Anne Ballroom

Lunch for all attendees   Noon, La Nouvelle Orleans

Wednesday:

Breakfast   8:00 - 9:00 AM, La Nouvelle Orleans

Members Meeting (open to all)   9:00 AM - Noon, Queen Anne Ballroom

Ways to Participate This Week (Membership Not Required!)

- Meet your fellow attendees at meals and during breaks

- Join a lunch table topic discussion led by an Advisory Council member

- ARIN Board, Advisory Council, NRO Number Council and Staff all have ribbons on our name tags – seek us out and ask questions

- Go the floor microphones in the meeting room, be sure to state name and organization upfront

- Raise your hand to voice your opinion when votes are taken during policy discussions

ARIN 40
SAN J°SE · 5-6 OCT 2017

ARIN 41
MIAMI, FLORIDA | 15-18 APRIL 2018

FELLOWSHIP
PROGRAM
American Registry for Internet Numbers

https://www.arin.net/participate/meetings/fellowship.html

Don't Forget Your Survey!

Please complete the survey form and drop it in the bowl.

Be present in the meeting room tomorrow morning at the start for the drawing – you might win a $100 Think Geek gift certificate!

Questions?

Recommended Draft Policy ARIN-2016-3: Alternative simplified criteria for justifying small IPv4 transfers

What Does This Do?

- Allows organizations to qualify for the same amount of IPv4 addresses they already hold (up to a /16, or 64,000 addresses) via specified transfer as long as they have utilized 80 percent of what they already hold. This method of qualifying for IPv4 space could only be used once every six months, and is supplemental to existing policy.

Who Does This Impact?

- Any organization with current IPv4 allocations and in need of more would be affected by this policy, especially those in need of mid-sized IPv4 address blocks (up to a /16) through the transfer market.

Draft Policy ARIN-2016-8: Removal of Indirect POC Validation Requirement

What Does This Do?

- Restricts Point of Contact (POC) Validation outreach to only organizations with direct assignments, direct allocations, reallocations, and Autonomous System Numbers (ASNs), excluding POCs that are linked only to indirect assignments and indirect allocations. In short, this policy would stop POC validation outreach to organizations without a direct business relationship with ARIN.

What is POC Validation?

- Whois is a directory service for accessing registration data (information abut which organizations hold which IP addresses and ASNs), and because that information changes quite often, ARIN reaches out to each POC in Whois via email to make sure someone is still associated with the POC record. If they don't respond to that email within 60 days, their POC is marked as invalid, and users associated with invalid POCs have limited ARIN Online access until they become validated, and are publicly marked as invalid in Whois.

Draft Policy ARIN-2016-8: Removal of Indirect POC Validation Requirement, continued

Who Does This Impact?

- Anyone with a POC linked only to either an indirect assignment or an indirect allocation in the Whois database might be impacted by this policy (over 600,000 POCs), as they would be no longer be contacted for annual POC validation by ARIN, but may end up being contacted by their providers to keep their POC information up to date.

- Additionally, every organization with customers in the first category might also be impacted by this policy, as removing indirect POCs from ARIN's annual validation efforts places higher importance on direct resource holders accurately reporting their own reassignment data as part of the Shared Whois Project (SWIP).

Draft Policy ARIN-2016-9: Streamline Merger & Acquisition Transfers

What Does This Do?

- Allows an organization that has acquired another organization to justify a Merger and Acquisition Transfer by proving that they acquired the second organization, without needing to prove utilization of the combined resources of both organizations.

Who Does This Impact?

- Any organization currently acquiring another organization, or planning to, might be impacted by this policy, especially if the combined resources of both organizations equal an amount greater than that which the acquiring organization can justify under existing policy.

Draft Policy ARIN-2017-1: clarify slow start for transfers

What Does This Do?

- Adjusts current Specified Transfer size requirements using an algorithm that organizations would use to show utilization of their most recent transfer to extrapolate a two year growth projection.

Who Does This Impact?

- Any organization planning to be involved in a specified transfer, depending on how the specific algorithm applies to their situation. The proposed algorithm allows for a two-year pre-authorization period during which the organization may transfer "up to the total number of IPv4 addresses of the transfers included in the request, divided by the number of days (no less than 90) since the earliest specified transfer included in the request was completed, multiplied by 730."

Draft Policy ARIN-2017-2: Removal of Community Networks

What Does This Do?

- Removes the two sections of NRPM that are specifically meant for Community Networks and their operators.

What is a Community Network ?

- ARIN policy defines a Community Network as "any network organized and operated by a volunteer group operating as or under the fiscal support of a nonprofit organization or university for the purpose of providing free or low-cost connectivity to the residents of their local service area."

Who Does This Impact?

- Anyone involved in the operation of a Community Network might be impacted by this policy, as the language it removes allows for a Community Network to be treated as an end-user as opposed to an ISP for all ARIN purposes.

Draft Policy ARIN-2017-3: UPDATE TO NPRM 3.6: Annual Whois POC Validation

What Does This Do?

- Further outline methods and procedures involved in ARIN's annual Whois Point of Contact (POC) Validation. It includes which POCs are to be verified, staff procedure, and how to handle non-responsive POCs.

Who Does This Impact?

- Any organization with POCs in ARIN's Whois directory service database might be impacted by this policy, as it includes changes to how non-responsive POCs are handled and how ARIN staff will be going through the annual verification process internally.