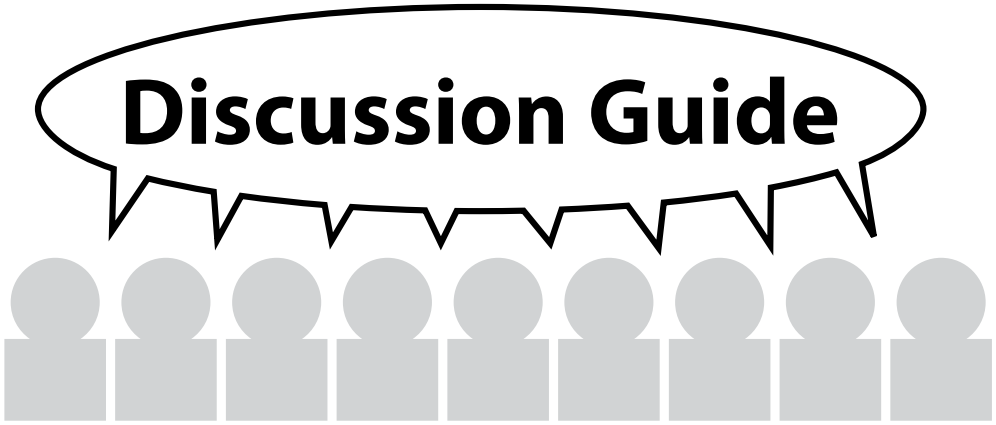

ARIN XXV Draft Policies and the PDP

https://www.arin.net/ARIN-XXV/

Welcome

Policies in the ARIN region are developed by the Internet community using the open and transparent process described in the ARIN Policy Development Process (PDP). The Internet community develops policies via discussion on the ARIN Public Policy Mail List (PPML) and at the ARIN Public Policy Meetings. Anyone may participate in the process – ARIN membership is not required.

The ARIN Board of Trustees adopts draft policies recommended to it by the ARIN Advisory Council if the Board determines that the PDP has been followed, that support and consensus for a policy has been reached among the community, and if the draft policies are consistent with ARIN's Articles of Incorporation and Bylaws and with the applicable laws and regulations.

The ARIN Public Policy Meeting is conducted in an orderly manner to understand the sense of the majority, to respect the views of the minority, and to protect the interests of those absent. Accordingly, the flow of the meeting is structured according to a published agenda and participants are expected to follow Meeting Courtesies and the Rules of Discussion.

Meeting Courtesies

All participants are requested to:

1. Either mute or turn off all communications devices such as cell phones, PDAs, and pagers.
2. Mute the audio output of their computers and other electronic devices.
3. Listen to the speakers and not engage in activities that are unrelated to the draft policy being discussed, such as processing e-mail.

Draft Policy Discussion Structure

Policy development is facilitated by the use of a structured process at the Public Policy Meeting. The steps in this process are:

1. Draft Policy Introduction: ARIN staff presents the history of the draft policy, including the date of introduction, the date of designation as a draft policy, and any previous considerations. The presentation also identifies the ARIN Advisory Council members who are shepherds of the draft policy.
2. E-mail Discussion Summary: ARIN staff presents a summary of the discussion related to the draft policy that occurred on the ARIN Public Policy Mailing List.
3. Legal Impact: ARIN staff presents the results of the analysis conducted by the ARIN General Counsel.
4. Implementation Impact: ARIN staff presents its impact analysis for implementing the draft policy.
5. Staff Observations: Staff presents any comments or observations about the draft policy.
6. Presentation: A member of the ARIN Advisory Council (or the petitioner) presents the draft policy.
7. Discussion: The Chair conducts a discussion of the draft policy using the Rules of Discussion.

ARIN XXV DISCUSSION GUIDE

For Discussion

This document contains the draft policies on the ARIN XXV agenda. The text of the draft policies in this document is up to date through 21 April 2010.

Included at the end of this document is a copy of ARIN's Policy Development Process (PDP).

The entire Internet community is invited and encouraged to participate in these policy discussions. Your active participation in these discussions is vital to the process and will help to form policies that are beneficial to all.

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Draft Policy 2010-1: Waiting List for Unmet IPv4 Requests

https://www.arin.net/policy/proposals/2010_1.html

Advisory Council Shepherds: **Scott Leibrand and Dan Alexander**

22 March 2010

Summary:

- *Provides rules for an expected queue of IPv4 requests when address space becomes limited*
  - *Requests would either be filled with ARIN's available space, or requestor has the option of being placed on a waiting list*
  - *Allocations/assignments are limited to one every three months*

Policy Statement:

4.1.6. Aggregation [Replace 4.1.6 with]

In order to preserve aggregation, ARIN attempts to issue blocks of addresses on appropriate "CIDR-supported" bit boundaries. As long as sufficient space is available, ARIN may reserve space to maximize aggregation possibilities. ARIN will make each allocation and assignment as a single continuous range of addresses.

[Add new section 4.1.8]

4.1.8 Unmet requests

In the event that ARIN does not have a contiguous block of addresses of sufficient size to fulfill a qualified request, ARIN will provide the requesting organization with the option to either modify their request and request a smaller size block, or be placed on a waiting list of pre-qualified recipients. Repeated requests, in a manner that would circumvent 4.1.6, are not allowed: an organization may only receive one allocation, assignment, or transfer every 3 months, but ARIN, at its sole discretion, may waive this requirement if the requester can document an unforeseen change in circumstances since their last request.

Qualified requesters whose request cannot be immediately met will also be advised of the availability of the transfer mechanism in section 8.3 as an alternative mechanism to obtain IPv4 addresses.

4.1.8.1 Waiting list

The position of each qualified request on the waiting list will be determined by the date it was approved. Each organization may have one approved request on the waiting list at a time.

4.1.8.2 Fulfilling unmet needs

As address blocks become available for allocation, ARIN will fulfill requests on a first-approved basis, subject to the size of each available address block and a re-validation of the original request. Requests will not be partially filled. Any requests met through a transfer will be considered fulfilled and removed from the waiting list.

Rationale:

ARIN will soon be unable to meet all approved requests for IPv4 address space. In the absence of a policy like this, it is unclear what ARIN should do with subsequent requests.

This policy would allocate reclaimed address blocks (and the last of the ARIN free pool) on a first-come-first-served basis, while preserving aggregation to the degree possible. As the free pool shrinks, requests larger than the largest block left would be placed on a waiting list, while smaller requests would use up the rest of it, until all requests have to go on the waiting list. As additional reclaimed addresses become available, the requests that have been waiting the longest would be met first. If a requester gets the addresses they need via transfer, then they would be removed from the waiting list and would need to wait and submit a new request for additional address space, either directly or via transfer.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

In section 4.1.8, the author says "Repeated requests, in a manner that would circumvent 4.1.6, are not allowed: an organization may only receive one allocation, assignment, or transfer every 3 months, but ARIN, at its sole discretion, may waive this requirement if the requester can document an unforeseen change in circumstances since their last request".

As written, the portion of the policy that starts with "but ARIN, at its sole discretion" gives no concrete criteria for staff to use in its assessment of the request. This "exception clause" is open to interpretation and may not be applied consistently by staff if there are no guidelines or rules for staff to follow. It essentially allows ARIN staff to determine the policy criteria for who can or can't qualify under this waiver.

ARIN General Counsel

"At this time counsel has no significant legal comments. Any system to order and prioritize requests for resources which may exceed the available resources must permit consistent administration by ARIN."

Resource Impact: *Moderate*

Draft Policy 2010-2: /24 End User Minimum Assignment Unit

https://www.arin.net/policy/proposals/2010_2.html

Advisory Council Shepherds: **Owen DeLong and Dan Alexander**

2 March 2010

Summary:

- *Reduces the end-user IPv4 minimum assignment from /22 (1,024 IP addresses) to /24 (256 IP addresses)*
- *End-users receiving < /22 from ARIN must renumber if they come back to request additional space*

Policy Statement:

[Replace section 4.3.2.2 of the NRPM with the following:]

4.3.2.2 Multihomed Connection

For multi-homed end-users who demonstrate an intent to announce the requested space in a multihomed fashion to two or more distinct ASNs not owned or controlled by the end-user, the minimum block of IP address space assigned is a /24. If assignments smaller than a /24 are needed, multihomed end-users should contact their upstream providers. When prefixes are assigned which are longer than /20, they will be from a block reserved for that purpose so long as that is feasible.

[Renumber the existing paragraph under the 4.3.6 to]

4.3.6.1 Utilization requirements for additional Assignment

[Add the following paragraph 4.3.6.2]

4.3.6.2 Additional assignments for small multi-homers

Any end-user that possesses an assignment smaller than /22 under any part of section 4.3 shall not be able to get an additional assignment unless they agree to return all existing 4.3 assignments with a /23 or longer prefix within 12 months of receiving a new assignment. The new assignment shall be sized to accommodate their existing utilization in addition to their justified additional growth space under section 4.3.6.1. The common cases for this are expected to be a /24 returned after receipt of a /23, or a /23 returned after receipt of a /22.

Rationale:

This policy attempts to incorporate the recent and historical discussions of policy for multi-home users on PPML. The intent is to provide as fair a process as possible for multi-homed organizations down to the smallest feasible size while still preserving some control over growth in the routing table.

It has been repeatedly noted that /24 multi-homers exist today with PA space and still occupy a routing table slot, so, it is unlikely that moving this boundary to /24 would significantly impact the routing table.

By requiring smaller assignments to renumber and return, rather than add more small blocks to their assignments, this policy seeks to further reduce the chances of unnecessary growth in the routing table and encourage good aggregation where possible.

Does this apply only to end users? Yes, this policy applies only to end users. This policy does not represent a good solution for organizations that are delegating space to other entities. If a case can be made that such a policy is needed for ISPs, then, the author is happy to work with interested parties to craft such a policy, but, this policy would be unnecessarily onerous on ISPs, and, as an ISP policy could be somewhat onerous to their peers and/or upstream providers.

What about resources obtained from policies other than 4.3 or outside of ARIN? Such resources would not be counted for excluding an organization from this policy. The intent is to limit IPv4 micro-allocations for multi-homed end-user organizations under this policy to a single assignment unless each such assignment is /22 or larger. This is to prevent unnecessary routing table growth. This is a tradeoff, and, not the ideal solution for smaller end-user organizations, however, author believes that this is the best policy likely to gain consensus at this time and believes that it is incrementally far better for such organizations than current policy.

If I grow, I have to renumber? Not necessarily... If you have a /24 under this policy, and you want to grow that, then, you will likely need to renumber. Depending on ARIN resource management and timing, ARIN may simply be able to give you the /23 that includes your /24. More likely, you will get a new /23, have 1 year to renumber into that and return your /24. At most, you would be subject to two such renumbering cycles under this policy (24->23 and 23->22) before you meet the criteria for other policies which do not require renumbering.

Other policies don't include renumbering provisions, why this one? The policy which allows multi-homed organizations to get a /22 was originally written at /24. That policy was shouted down and /22 was the compromise achieved to gain community consensus for anything smaller than /20. Author hopes that this compromise will allow many organizations to get resources they need with minimal impact while assuring the community that doing so will not cause an explosion in the routing table.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

The policy text uses inconsistent terminology when it refers to prefix sizes; it says "blocks smaller than /24" and "when prefixes are assigned which are longer than /20". The terminology should be adjusted so that it uses the same terminology for cidr prefixes consistently throughout the policy.

ARIN General Counsel

This policy poses no significant legal issues that need to be considered".

Resource Impact: *Minimal*

Draft Policy 2010-3: Customer Confidentiality

https://www.arin.net/policy/proposals/2009_3.html

Aaron Wendel has control of this draft policy through ARIN XXV Advisory Council Shepherds: **Bill Sandiford and Owen DeLong**

2 February 2010

Summary:

- *Allows ISPs to substitute their mailing address and phone number in place of their customers when registering reassignment information in ARIN's WHOIS*
- *Requires ISPs to provide full customer information to ARIN when asked by staff*
- *Stipulates that ARIN will hold that information in "strictest confidence"*

Policy Statement:

ISPs may choose to enter the customer's name along with the ISP's address and phone number in reassignments and reallocations in lieu of the customer's address and phone number. The customer's actual information must be provided to ARIN on request and will be held in the strictest confidence.

Rationale:

Version 2.0 clarifies the need for the customer name to remain in the SWIP and RWHOIS information.

Customer contact lists are one of the most proprietary and confidential pieces of information in any business. The requirements for ISPs to publish those lists via SWIP or RWHOIS runs contrary to good business practices and invites competitors and others to solicit both individuals and companies receiving reassignments and sub allocations from upstream providers.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

Staff has no comments

ARIN General Counsel

This new proposal permits ARIN to obtain the information it needs to fairly and accurately access utilization. The proposal appears intended to afford privacy protection of customer contact information. However it must be balanced by risks that may create. The proposal defines ARIN's treatment of customer data using a non-legal formulation, e.g. "strictest confidence". Such a term conveys an intended sense of how such data should be treated, but is open to wide interpretation. This language, if enacted, could potentially increase ARIN's legal risk that current ARIN practices might be deemed insufficient under this standard. Current policy attempts to addresses privacy protection for IPv6 reassignment data. For example, NRPM 6.5.5, which states "IRs shall maintain systems and practices that protect the security of personal and commercial information that is used in request evaluation, but which is not required for public registration." More precise language, such as that in 6.5.5, might also be considered as a substitute for the term "strictest confidence".

Resource Impact: Minimal

Draft Policy 2010-4: Rework of IPv6 allocation criteria

https://www.arin.net/policy/proposals/2010_4.html

Advisory Council Shepherds: **Cathy Aronson and Bill Darte**

23 February 2010

Summary:

- *Replaces existing policy with new, relaxed criteria. ISPs/LIRs can qualify for a /32 by meeting one of the three following criteria:*
  - *Have an IPv4 allocation, or*
  - *Be multi-homed, or*
  - *Have a plan to connect 50 customers within 5 years*
- *Requests allowed for private networks*

Policy Statement:

[Delete section 6.4.3. Minimum Allocation.]
[Modify the following sections;]

6.5.1 Initial allocations for ISPs and LIRs

6.5.1.1. Initial allocation size

Organizations that meet at least one of the following criteria are eligible to receive a minimum allocation of /32. Requests for larger allocations, reasonably justified with supporting documentation, will be evaluated based on the number of existing users and the extent of the organization's infrastructure.

6.5.1.2. Criteria for initial allocation to ISPs

Organizations may justify an initial allocation for the purpose of assigning addresses to other organizations or customers that it will provide IPv6 Internet connectivity to, with an intent to provide global reachability for the allocation within 12 months, by meeting one of the following additional criteria:

a. Having a previously justified IPv4 ISP allocation from ARIN or one of its predecessor registries, or;

b. Currently being IPv6 Multihomed or immediately becoming IPv6 Multihomed and using an assigned valid global AS number, or;

c. By providing a reasonable plan detailing assignments to other organizations or customers for one, two and five year periods, with a minimum of 50 assignments within 5 years.

6.5.1.3. Criteria for initial allocation to other LIRs

Organizations may justify an initial allocation for the purpose of assigning addresses to other organizations or customers that it will provide IPv6 based network connectivity services to, not necessarily Internet connected, by meeting one of the following additional criteria:

a. Having a previously justified IPv4 ISP allocation from ARIN or one of its predecessor registries, or;

b. By providing a reasonable technical justification, indicating why an allocation is necessary, including the intended purposes for the allocation, and describing the network infrastructure the allocation will be used to support. Justification must include a plan detailing assignments to other organizations or customers for one, two and five year periods, with a minimum of 50 assignments within 5 years.

Rationale:

This proposal provides a complete rework of the IPv6 allocation criteria while maintaining many of the basic concepts contained in the current policies. The order of the subsections of 6.5.1 are rearranged moving the initial allocation size to 6.5.1.1. This will facilitate adding future criteria without additional renumbering the current policies.

The initial allocation criteria include the following general concepts:

- The need for an allocation is only justified by the need to assign resource to customers, either internal or external.
- When the need to provide Internet connectivity is use to justify resources it is implied the resources should be advertised to the Internet, within some reasonable time frame after they are received.
- IPv4 resources may be use to justify the need for IPv6 resources.
- An ISP may justify independent resource by being Multihomed or planning to assign IPv6 resource to some minimum number of customers.
- It should be possible to justify an IPv6 allocation for more than just classical ISPs, such as non-connected networks or other types of LIRs. But additional justification should be required, describing the purpose and network infrastructure the allocation will be supporting.

Finally, section 6.4.3 Minimum Allocation, is deleted as it is incomplete and redundant anyway.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- *This policy provides very clear direction for ISPs requesting IPv6 address space stating that they must "assign addresses to other organizations or customers that it will provide IPv6 Internet connectivity to, with an intent to provide global reachability for the allocation within 12 months". This distinction should help clarify the role of the ISP in relation to this policy.*
- *Since 6.5.1.3b does not specify whether "other organizations or customers" must be external, it seems likely that this policy will open up allocation policy to enterprise customers (who presently receive assignments under the End-user policies). Currently the larger enterprise businesses we see typically define their operating*

divisions and departments as 'customers'.

- *The new ISP and LIR qualification criteria lower the bar to receiving a /32, which should significantly increase the number of allocations ARIN makes each year.*
- *6.5.1.3 states that a LIR can qualify for an allocation if it will be "assigning addresses to other organizations or customers that it will provide IPv6 based network connectivity services to, not necessarily Internet connected". The words "network based connectivity services" are somewhat confusing. Staff interprets this to mean that a LIR will not necessarily be providing Internet connectivity to its customers, but we are seeking clarification on this point.*

ARIN General Counsel

"This proposal poses no significant legal issues."

Resource Impact: Minimal

Draft Policy 2010-5: Reduce and Simplify IPv4 Initial Allocations

https://www.arin.net/policy/proposals/2010_5.html

Advisory Council Shepherds: **Heather Schiller and Robert Seastrom**

23 February 2010

Summary:

- *Reduces IPv4 minimum allocation from /22 (1,024 addresses) to /23 (512 addresses)*
- *ISPs receiving < /20 (4,096 addresses) from ARIN must renumber if they come back to request additional space*

Policy Statement:

[Modify section 4.2.1.5. Minimum allocation:]

In general, ARIN allocates IP address prefixes no longer than /23 to ISPs. If allocations smaller than /23 are needed, ISPs should request address space from their upstream provider. When prefixes are assigned which are longer than /20, they will be from a block reserved for that purpose whenever that is feasible.

[Replace the contents of section 4.2.2. Initial allocation to ISPs:]

4.2.2.1. Use of /24

The efficient utilization of an entire previously allocated /24 or equivalent from their upstream ISP.

4.2.2.2. Efficient utilization

Demonstrate efficient use of IP address space allocations by providing appropriate documentation, including assignment histories, showing their efficient use. ISPs must provide reassignment information on the entire previously allocated block(s) via SWIP or RWHOIS server for /29 or larger blocks. For blocks smaller than /29 and for internal space, ISPs should provide utilization data either via SWIP or RWHOIS server or by using the table format described in Section 4.2.3.7.5.

4.2.2.3. Three months

Provide detailed information showing specifically how the initial allocation will be utilized within three months.

4.2.2.4. Renumber and return

ISPs receiving an initial allocation smaller than /20 must agree that the newly requested IP address space will be used to renumber out of the current addresses which will be returned to the assigning organization within 12 months. ISPs receiving an initial allocation equal to or larger than /20 may wish to renumber out of their previously allocated space. In this case, an ISP must use the new prefix to renumber out of that previously allocated block of address space and must return the space to its upstream provider.

4.2.2.5. Replacement initial allocation

Any ISP which has received an initial allocation, or previous replacement initial allocation, smaller than /20 who wishes to receive additional address space must request a replacement initial allocation. To receive a replacement initial allocation, an ISP must agree to renumber out of and return the existing allocation in it's entirety within 12 months of receiving a new allocation and provide justification for the new allocation as described in section 4.2.4. Multihomed organizations holding a /22 or a /21 at the time of policy adoption are exempt from having to renumber and return for a period of 12 months after this policy is adopted.

Rationale:

This policy proposal fundamentally changes and simplifies the initial IPv4 allocations to ISPs by doing the following:

1. Makes moot whether the requesting ISP is multihomed or not, with this policy change all initial ISPs request under the same minimums.

2. Lowers the minimums, making it easier for smaller ISPs to qualify for direct allocations from ARIN.

3. Reduces fragmentation of the allocated IPv4 pool by forcing smaller ISPs who do qualify under the minimum to return the small allocation when they outgrow it. Note particularly that this does not "change the bar" for ISPs who have already received small allocations, as they will have not agreed to return those smaller allocations when they get larger allocations.

4. Indirectly encourages the adoption of IPv6 as the ISPs that now qualify for numbering under this policy change will be considered an LIR and thus satisfy one of the IPv6 requirements in section 6.5.1.1

This policy proposal idea grew out of Proposal 98 and 100 and the discussions surrounding those proposals as well as many discussions on the ppml and on arin-discuss mailing lists.

For starters, it's well known that while transit networks have the ability to filter IPv4 BGP advertisements, few to none filter anything larger than a /24 (any who do filter /24 or larger have a default route to fall back on), and a /24 (for perhaps no better reason than it happens to be a "class C") has become the de-facto standard minimum. As a result, assigning blocks smaller than a /22 (the current minimum under 4.2.2) isn't going to break anything.

Secondly, the primary motivator for denying smaller ISPs an initial allocation from ARIN is to slow the growth of the DFZ, due to concerns that growth of the so-called "IPv4 global routing table" would exceed memory requirements in routers operated by transit networks. This is why Section 4.2.2 was split into multihomed and non-multihomed in the first place, to help "raise the bar" and prevent a land rush. Section 4.2.2.1 makes it so that only really large ISPs qualify for an initial allocation, Section 4.2.2.2 makes it so that only ISPs with the financial ability to bring in multiple feeds can qualify. Basically, your either big and poor or small and rich - whereas the typical "garage operator" ISP would be small and poor.

Our belief is that while this may have worked a decade ago, it's a moot issue now. For one thing, nothing prevents orgs that obtain larger allocations from splitting their advertisements. For example an org that has a /22 and 2 feeds, one larger than the other, might choose to advertise 2 /23's so they can prepend one of the /23's towards the smaller feed, so as to reduce traffic. Orgs that have distributed NOCS and even larger allocations have also done this for traffic flow reasons. There is no real guarantee than an org getting a contiguous block will actually advertise it under a single route entry, so it seems somewhat hypocritical to deny smaller ISPs an initial allocation because of the reason that small allocations clog up the so-called "global route table" when larger ISPs can and sometimes do clog it up by subnetting.

The Internet landscape has changed tremendously, it is much more expensive now for "garage operators" to initiate operations, and the ISP industry has had a lot of consolidation. These factors are much more of a deterrent to small operators getting started and wanting an initial allocation. And, with small operators, labor is costly and renumbering out of an upstream-assigned IPv4 block is a big barrier as well.

We feel that allowing smaller ISPs to qualify now for IPv4 will have a number of benefits:

1. It's possible that post-IPv4 runout, financial pressure to justify assignments will develop among transit networks as the "market rate" of IPv4 rises. That may lead to smaller ISPs who don't have their own assignments to be pressured to shrink operations (or be pushed out completely), by upstreams eager to sell IPv4 blocks on the transfer market.

2. Sometimes an issue is helped more by being "nibbled to death by ducks". If a large number of small ISPs were to obtain IPv4 and follow up by obtaining IPv6 at the same time, the cumulative effect of many small operators calling their upstreams and pressuring their upstreams to supply native IPv6 routing might be much stronger - and might cause more of them to get on the ball with IPv6 deployments.

3. Small IPv4 subnets that a /23 or /22 allocation can be made from will be increasingly available to ARIN from reclamation efforts, thus allocating small subnets that the RIR generates from these efforts to legitimate ISPs will help to prevent "squatting" on them from spammers and other network criminals, without consuming "virgin" blocks in the free pool. It might even be possible for ARIN to use portions of the "old swamp" (ie: 192.5.0.0/16, 192.12.0.0/16, 192.16.0.0/16, etc.) for this.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- *4.2.2.4 states: "ISPs receiving an initial allocation equal to or larger than /20 may wish to renumber out of their previously allocated space. In this case, an ISP must use the new prefix to renumber out of that previously allocated block of address space and must return the space to its upstream provider." This is not declarative policy text and does not provide definitive direction to the community on how to qualify for IPv4 resources or to the staff on how to assess requests for IPv4 resources. If this isn't a policy requirement, it should be removed from the policy text and perhaps placed in a best practices guide.*
- *4.2.2.5 has confusing uses of the word "initial". The section is clearly intended to apply to any direct allocation longer than a /20, including 2nd, 3rd, and nth replacement allocations. But it uses "initial" allocation too many times. For clarity, staff suggests removing the word "initial" from both the title and all instances beyond the first usage of the word.*
- *The policy lays out numerous renumbering requirements and timeframes, however it does not specify any repercussions for non-compliance, leaving the ARIN staff on its own to determine the course of action. Staff experience has shown us that adherence to renumbering requirements in existing policies has often been problematic for some organizations. When a company does not adhere to their renumbering commitments, it forces ARIN to make a judgment call that could potentially impact an organization's business and productivity.*

ARIN General Counsel

"At this time counsel has no significant legal comments."

Resource Impact: Moderate

Draft Policy 2010-6: Simplified M&A transfer policy

https://www.arin.net/policy/proposals/2010_6.html

Advisory Council Shepherds: **Scott Leibrand and Bill Darte**

23 February 2010

Summary:

- *Clearly states that ARIN will consider transfer requests either at the time of merger or acquisition or anytime thereafter as long as proper documentation is provided*
- *Clarifies that any unused space must be returned to ARIN*

Policy Statement:

[Replace section 8.2 with:]

8.2. Mergers and Acquisitions

ARIN will consider requests for the transfer of number resources in the case of mergers and acquisitions upon receipt of evidence that the new entity has acquired assets that used the transferred resources from the current registrant. ARIN will maintain an up-to-date list of acceptable types of documentation.

In the event that number resources of the combined organizations are no longer justified under ARIN policy at the time ARIN becomes aware of the transaction, through a transfer request or otherwise, ARIN will work with the resource holder(s) to return, aggregate, or reclaim resources as appropriate via the processes outlined in current ARIN policy (for example, sections 4.6, 4.7, or 12 of the NRPM).

[Add] "In addition to transfers under section 8.2, " [at the beginning of section 8.3. Transfers to Specified Recipients.]

Rationale:

This policy proposal: attempts to simplify the M&A transfer section of the NRPM; eliminates the ambiguity discussed at the ARIN Public Policy Meeting (PPM) in Dearborn by clarifying that transfers can occur under either 8.2 or 8.3 independently; and attempts to address the concerns raised in the staff policy implementation report at the Dearborn PPM (https://www.arin.net/participate/meetings/reports/ARIN_XXIV/PDF/thursday/policy_exp_report.pdf)

The idea here is to simply say that ARIN will allow M&A transfers, and to require the return of any number resources for which there is no longer a justified need after the acquisition. Preferably that would happen voluntarily under the policies of NRPM 4.6 (Amnesty), but it also leaves the door open for ARIN to revoke space under NRPM 12 (Resource Review) if necessary. By implication, future needs that would qualify the organization for an allocation/assignment would likewise justify keeping transferred space. In particular, see the language of NRPM section 12, paragraphs 4 and 4a.

This policy also should dramatically increase the completion rate for transfer requests, as the evaluation of whether space is efficiently utilized after the transfer can occur in parallel, completely independently of the transfer request, and can continue even if the transfer request is abandoned.

The bulleted lists of acceptable documentation removed from the NRPM should be maintained by ARIN elsewhere on the website, such as at https://www.arin.net/resources/request/transfers.html

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- *This proposal simplifies the M&A transfer criteria and clarifies several things that may not be apparent with the existing policy. It better clarifies that 8.3 transfers are independent of 8.2 transfers and it clearly states that ARIN will consider transfers after the actual M&A has occurred as long as the proper documentation is supplied.*
- *The proposal adds new, more directive criteria that says if staff sees that the resources being transferred are not justified under any existing ARIN policy, staff must work with the recipient organization to return, aggregate or reclaim the resources. Based on staff experience with M&A transfers, it is possible that these more stringent requirements could deter organizations with v4 resources from initiating transfers, thus ensuring that the WHOIS data remains stale and out of date. Past experience with M&A transfers has shown us that when we ask for detailed utilization information and/or ask for unused or under-utilized address space back, many organizations will simply abandon their transfers.*

ARIN General Counsel

"This proposal poses no significant legal issues."

Resource Impact: Moderate

Draft Policy 2010-7: Simplified IPv6 policy

https://www.arin.net/policy/proposals/2010_7.html

Advisory Council Shepherds: **David Farmer and Scott Leibrand**

Version/Date: 23 February 2010

Summary:

- *Significantly changes IPv6 policy*
  - *Organizations would be allowed to qualify for one each of the following prefix lengths: /48, /40, /32, /28, and /24*
  - *Qualification for each prefix size is based on specific requirements (multi-homing, host count, # of sites, and # of projected /48s), and stipulates that each block size is issued from a specific range*

Policy Statement:

[Delete 6.1 Introduction - This is all historical.

Leave 6.3 as is (renumber to 6.1) - These still accurately reflect the Goals we want our policy to follow.]

[Delete 6.4.2 - 6.4.4

These principles don't seem worthy of elevation to special status. 6.4.1 is handled in a separate Draft Policy.]

[Replace 6.5 - Policies for allocations and assignments with text below

(renumber to 6.2). This seems to be where most of the changes and simplification are needed.]

[Delete 6.7 Appendix A: HD-Ratio

The numbers from this table were used to determine the thresholds in 6.2 below, so this section is confusing and no longer needed.]

[Delete 6.9 IPv6 Reassignments policy

This is redundant and covered better elsewhere.]

[Move 6.10 into 6.2.3.2 below]

[Replacement text:]

2.12. Critical Infrastructure Providers Critical infrastructure providers of the Internet include public exchange points, core DNS service providers (e.g. ICANN-sanctioned root, gTLD, and ccTLD operators) as well as the RIRs and IANA.

4.4. Micro-allocation

ARIN will make IPv4 micro-allocations to Critical Infrastructure Providers per section 2.8. These allocations will be no longer than a /24. Multiple allocations may be granted in certain situations.

4.4.1. Allocation and assignment from specific blocks

Exchange point allocations MUST be allocated from specific blocks reserved only for this purpose. All other micro-allocations WILL be allocated out of other blocks reserved for micro-allocation purposes. ARIN will make a list of these blocks publicly available.

4.4.2. Exchange point requirements

Exchange point operators must provide justification for the allocation, including: connection policy, location, other participants (minimum of two total), ASN, and contact information. ISPs and other organizations receiving these micro-allocations will be charged under the ISP fee schedule, while end-users will be charged under the fee schedule for end-users. This policy does not preclude exchange point operators from requesting address space under other policies.

6.2. Policies for IPv6 allocations and assignments

6.2.1. Allocations and assignments

To meet the goal of Fairness, ARIN makes both allocations and assignments according to common criteria. Allocations are made to LIRs, and assignments to certain end users.

6.2.2. Assignments from LIRs/ISPs

End-users are assigned an end site assignment from their LIR or ISP. The exact size of the assignment is a local decision for the LIR or ISP to make, using a minimum value of a /64 (when only one subnet is anticipated for the end site) up to the normal maximum of /48, except in cases of extra large end sites where a larger assignment can be justified.

The following guidelines may be useful (but they are only guidelines):

- /64 when it is known that one and only one subnet is needed
- /56 for small sites, those expected to need only a few subnets over the next 5 years.
- /48 for larger sites

For end sites to whom reverse DNS will be delegated, the LIR/ISP should consider making an assignment on a nibble (4-bit) boundary to simplify reverse lookup delegation.

6.2.3. Allocations and assignments from ARIN

6.2.3.1 Goals

To balance the goals of Aggregation, Conservation, Fairness, and Minimized Overhead, ARIN normally issues IPv6 addresses only in the discrete sizes of /48, /40, /32, /28, /24, or larger. Each organization or discrete network may qualify for one allocation or assignment of each size.

6.2.3.1.1 Allocation and assignment from specific blocks

Each allocation/assignment size will be made out of separate blocks reserved for that purpose. Additionally, non-routed assignments for internal infrastructure, and assignments to Critical Infrastructure Providers per section 2.8, will each be made out of separate blocks reserved for those purposes. ARIN will make a list of these blocks publicly available.

6.2.3.2 X-Small (/48)

To qualify for a /48 allocation or assignment, an organization must:

- Be Multihomed per section 2.7, and qualify for an ASN per section 5; or
- Serve at least 1000 hosts; or
- Demonstrate efficient utilization of all direct IPv4 assignments and allocations, each of which must be covered by any current ARIN RSA; or
- Require a non-routed block for internal infrastructure; or
- Be a Critical Infrastructure Provider per section 2.8.

6.2.3.3 Small (/40)

To qualify for a /40 allocation or assignment, an organization must:

- Have two or more Multihomed sites, each of which would qualify for a /48; or
- Serve at least 2000 hosts; or
- Be an LIR.

6.2.3.4 Medium (/32)

To qualify for a /32 allocation or assignment, an organization must:

- Have 100 or more sites, each of which would qualify for a /48; or
- Be an existing, known LIR; or
- Have a plan to provide IPv6 connectivity to other organizations and assign at least 100 end-site assignments to those organizations within 5 years.

6.2.3.5 Large (/28)

To qualify for a /28, an organization must demonstrate the need to make assignments and/or reallocations equal to at least 25,000 /48s, based on current network infrastructure and customer base.

6.2.3.6 X-Large (/24)

To qualify for a /24, an organization must demonstrate the need to make assignments and/or reallocations equal to at least 330,000 /48s, based on current network infrastructure and customer base.

6.2.3.7 XX-Large (larger than /24)

Allocations or assignments larger than /24 may be made only in exceptional cases, to organizations that demonstrate the need to make assignments and/or reallocations equal to at least 4,500,000 /48s, based on current network infrastructure and customer base. If approved, the allocation prefix length will be based on the number of /24s justified (at 4,500,000 /48s each), rounded up to the next whole CIDR prefix. Subsequent XX-Large assignments may be made if justified using the same criteria.

6.3. Registration [Copied from NRPM 6.5.5]

When an organization holding an IPv6 address allocation makes IPv6 address assignments, it must register assignment information in a database, accessible by RIRs as appropriate (information registered by ARIN may be replaced by a distributed database for registering address management information in future). Information is registered in units of assigned /56 networks. When more than a /56 is assigned to an organization, the assigning organization is responsible for ensuring that the address space is registered in an ARIN database.

6.3.1. Residential Customer Privacy [Copied from NRPM 6.5.5.1]

To maintain the privacy of their residential customers, an organization with downstream residential customers may substitute that organization's name for the customer's name, e.g. 'Private Customer - XYZ Network', and the customer's street address may read 'Private Residence'. Each private downstream residential reassignment must have accurate upstream Abuse and Technical POCs visible on the WHOIS record for that block.

6.3.2. Reverse lookup [Copied from NRPM 6.5.6]

When ARIN delegates IPv6 address space to an organization, it also delegates the responsibility to manage the reverse lookup zone that corresponds to the allocated IPv6 address space. Each organization should properly manage its reverse lookup zone. When making an address assignment, the organization must delegate to an assignee organization, upon request, the responsibility to manage the reverse lookup zone that corresponds to the assigned address.

Rationale:

This policy proposal attempts to simplify IPv6 policy in a number of ways.

For example, it:

- Deletes a number of historical sections and items that duplicate text elsewhere in the NRPM.
- Removes the HD-ratio, instead incorporating values calculated from it as the basis for qualification criteria.

It also replaces & rewrites section 6.5 "Policies for allocations and assignments" entirely. This rewrite:

- Eliminates the different criteria for allocations (ISPs) vs.
- assignments (end users) and replaces them with a single common set of criteria for both classes of users. The allocation vs. assignment distinction itself is preserved, as it still forms a useful basis for a cost-recovery fee structure, and for other parts of the NRPM (such as whois policy).
- Creates a size-class-based system for allocating IPv6 address blocks.
- This has a number of advantages over the existing policy:
- Allows for safe filtering of traffic-engineering (TE) more-specific route announcements.
- In exchange (since PA more-specifics are expected to be filterable), allows any multihomed organization to get an assignment from ARIN. The smaller number of such PI assignments (compared to TE more-specifics) should mean that such assignments will largely be accepted across the DFZ.
- Expands the use of discrete blocks from which all allocations will be of identical prefix length and categorization. This will enable safer and easier TE filtering, as mentioned above.
- Expands the availability of non-routed blocks for internal infrastructure. Since routable blocks are available to any multihomed organization, there is no longer a need to restrict the availability of blocks from the non-routable pool.
- Makes allocations available to any LIR.

Note: In the event of an M&A transfer per section 8.2 that would result in more than one block of a given size class being held by the combined organization, the organization should be encouraged to renumber into a single larger block and return the smaller block(s) when feasible. However, as long as the organization doesn't require any additional resources, this policy does not force them to make any changes. OTOH, if they request a larger block and still hold two or more smaller blocks, they would be required to return the smaller block as a condition for receiving the larger one.

Related non-policy suggestion: in order to provide a small incentive for organizations to renumber and return out of smaller unneeded blocks, the ARIN fee schedule could be modified such that fees are assessed, according to the ARIN fee schedule, for each size block issued, rather than based on the total quantity of space held.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

No Comments (Earlier feedback was addressed).

ARIN General Counsel

"At this time counsel has no significant legal comments."

Resource Impact: Minimal

Draft Policy 2010-8: Rework of IPv6 assignment criteria

https://www.arin.net/policy/proposals/2010_8.html

Advisory Council Shepherds: **David Farmer and Scott Leibrand**

Version/Date: 5 April 2010

Summary:

- *Allows almost all requestors, including those with private (non-Internet connected networks) to receive a /48 by meeting one of three criteria:*
  - *Be multi-homed, or*
  - *Have existing IPv4 assignment, or*
  - *Provide technical justification and a 1, 2, and 5 year plan*

Policy Statement:

6.5.8. Initial assignments

6.5.8.1. Initial assignment size

Organizations that meet at least one of the following criteria are eligible to receive a minimum assignment of /48. Requests for larger initial assignments, reasonably justified with supporting documentation, will be evaluated based on the number of sites and the number of subnets needed to support a site.

Organizations may request up to a /48 for each site in their network, with the overall allocation rounded up to the next whole prefix only as necessary. A subnet plan demonstrating a utilization of 33,689 or more subnets within a site is necessary to justify an additional /48 for any individual site, beyond this the 0.94 HD-Ratio metric of the number of subnets is used.

All assignments shall be made from distinctly identified prefixes, with each assignment receiving a reservation for growth of at least a /44. Such reservations are not guaranteed and ARIN, at its discretion, may assign them to other organizations at any time.

Note: Organizations with multiple sites are encouraged to consider the use /56s for smaller satellite sites.

6.5.8.2. Criteria for initial assignment to Internet connected end-users

Organizations may justify an initial assignment for connecting their own network to the IPv6 Internet, with an intent to provide global reachability for the assignment within 12 months, and for addressing devices directly attached to their network infrastructure, by meeting one of the following additional criteria:

a. Having a previously justified IPv4 end-user assignment from ARIN or one of its predecessor registries, or;

b. Currently being IPv6 Multihomed or immediately becoming IPv6 Multihomed and using an assigned valid global AS number, or;

c. By providing a reasonable technical justification indicating why other IPv6 addresses from an ISP or other LIR are unsuitable and a plan detailing the utilization of sites and subnets for one, two and five year periods.

Examples of justifications for why addresses from an ISP or other LIR may be unsuitable include, but are not limited to:

- An organization that operates infrastructure critical to life safety or the functioning of society, has justification based on the fact that renumbering would have a broader than expected impact than simply the number of hosts involved. These would include; hospitals, fire fighting, police, emergency response, power or energy distribution, water or waste treatment, traffic management and control, etc…
- Regardless of the number of hosts involved, an organization has justification if renumbering would affect 1000 or more individuals either internal or external to the organization.

6.5.8.3 Criteria for initial assignment to non-connected networks

Organizations may justify an initial assignment for operating their own non-connected IPv6 network and for addressing devices directly attached to their network infrastructure, by meeting one of the following additional criteria:

a. Having a previously justified IPv4 end-users assignment from ARIN or one of its predecessor registries, or;

b. By providing a reasonable technical justification indicating why an assignment for a non-connected networks is necessary, including the intended purpose for the assignment, and describing the network infrastructure the assignment will be used to support. Justification must include why Unique Local IPv6 Unicast Addresses (ULA) is unsuitable and a plan detailing the utilization of sites and subnets for one, two and five year periods.

Examples of justifications for why ULA may be unsuitable include, but are not limited to:

- The need for authoritative delegation of reverse DNS, including documentation why this is necessary.
- The need for documented uniqueness, beyond the statistical uniqueness provided by ULA, including documentation why this is necessary.
- A documented need to connect with other networks connected to or not connected to the Internet

NOTE: Organizations are encouraged to consider the use of ULA, for non-connected networks, see RFC 4193 for details.

6.5.9. Subsequent assignments

Subsequent assignments may be made when the need for additional sites or subnets are justified with reasonable supporting documentation. When possible, subsequent assignments will be made from an adjacent address block.

Organizations may request up to a /48 for each site in their network, with the overall allocation rounded up to the next whole

prefix only as necessary. A subnet plan demonstrating a utilization of 33,689 or more subnets within a site is necessary to justify an additional /48 for any individual site, beyond this the 0.94 HD-Ratio metric of the number of subnets is used.

Note: Organizations with multiple sites are encouraged to consider the use of /56s for smaller satellite sites.

[Move current 6.5.9 Community Network Assignments as-is to section 6.5.10.]

Rationale:

This proposal provides a complete rework of the IPv6 end-user assignment criteria, removing the dependency on IPv4 policy, while maintaining many of the basic concepts contained in the current policies. The order of the subsections of 6.5.8 was rearranged moving the initial assignment size to 6.5.8.1 and subsequent assignments to 6.5.9. This will facilitate adding future criteria without additional renumbering of current policies.

The initial assignment criteria include the following general concepts:

- When Internet connectivity is use to justify resources it is implied the resources should be advertised to the Internet, within some reasonable time frame after they are received.
- Previously justified IPv4 resources may be used to justify the need for IPv6 resources.
- Internet multihoming is sufficient justification for an end-user assignment in and of itself.
- Other Internet connected end-users must justify why an ISP or LIR assignment is not sufficient for their needs.
- Non-connected networks must describe the purpose and network infrastructure the assignment will be supporting, including why ULA is not sufficient for their needs.
- Organizations with multiple sites are allowed to request a /48 for each site, with a suggestion to use /56s for smaller sites.
- While HD-Ratio is not completely eliminated it really only applies to situations that an individual site of an organization needs more that a /48.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- *The policy adds very specific criteria for assigning a site more than a /48. Having this specific criteria lay out such clear rules makes it easier for both requesters and ARIN staff to understand and provides the type of necessary details that have been missing from the current policy. (Staff understands that this policy allows an organization to define what a site is.)*
- *6.5.8.2 relaxes the current qualification criteria for a /48 per site and opens up the policy to pretty much everyone. This should significantly increase the number of assignments ARIN makes each year.*

ARIN General Counsel

"This proposal poses no significant legal issues."

Resource Impact: Minimal

POLICY DEVELOPMENT PROCESS

This version of the ARIN Policy Development Process was published on 7 January 2009. It supersedes the previous version.

Part One – Principle

1. Purpose

This document describes the ARIN Policy Development Process (PDP). The ARIN PDP is the process by which all policies governing the management of Internet number resources in the ARIN region are developed by and for the ARIN community. ARIN's Internet number resource policies are documented community decisions that directly determine the rules by which ARIN manages and administers Internet number resources.

Internet number resource policies are developed in an open and transparent manner by the Internet community. Anyone may participate in the process - ARIN membership is not required. The Policy Development Process (PDP) described in this document defines how policy is established in the ARIN region. Part I of this document provides background information regarding the ARIN PDP and Part II provides the details of the process.

2. Scope

1. Policies developed through the PDP are community selfregulatory statements that mandate or constrain actions. They apply throughout the ARIN region. Policies contribute to the security and stability of the Internet as they foster good stewardship of Internet number resources by ensuring fair distribution of resources and facilitating the operation of the Internet by those who use them.

2. Policies developed through the PDP do not describe a step-by-step process. Such a process is a called a procedure. Procedures are established by the policy implementer to execute the policy in such a manner to comply with the policy.

3. Polices developed through the PDP do not define a service to be offered by ARIN.

4. Policies developed through the PDP do not define or establish ARIN fees. All matters concerning fees are a fiduciary responsibility of the Board of Trustees.

5. The ARIN Board of Trustees adopts draft policies recommended to it by the ARIN Advisory Council if the Board determines that the PDP has been followed, that support and consensus for a policy has been reached among the community, and if the draft policies are consistent with ARIN's Articles of Incorporation and Bylaws and with the applicable laws and regulations.

6. Internet number resource policies are distinctly separate from ARIN general business practices and procedures. ARIN's general business practices (including fees) and procedures are not within the purview of the Policy Development Process. (The ARIN Consultation and Suggestion Process can be used to propose changes in non-policy areas.)

7. This version of the ARIN PDP is designed to bring forth clear, technically sound and useful policy; reduce overlapping policy proposals; require both staff and legal assessments; give adequate opportunity for discussion prior to each public policy meeting; and provide a means of review prior to possible adoption. The PDP empowers the ARIN Advisory Council as a policy development body with checks and balances, and maintains an open and transparent process.

3. Policy Development Principles

All policies are developed following three principles: open, transparent, and bottom-up.

3.1. Open

All policies are developed in an open forum in which anyone may participate. There are no qualifications for participation. Policy discussions in the ARIN region are conducted in an open, publicly accessible forum that consists of a Public Policy Mail List (PPML) and the Public Policy Meeting (PPM). Anyone may subscribe to the PPML and anyone may attend a PPM via the Internet or in person.

3.2. Transparent

All aspects of the PDP are documented and publicly available via the ARIN website. The PPML is archived. The proceedings of each PPM are published. All policies are documented in the Number Resource Policy Manual (NRPM). All policy statements in the NRPM are cross referenced to the original policy proposal, the archives of the PPML, all related PPM proceedings, and the minutes of the appropriate Advisory Council and the ARIN Board of Trustees meetings. Finally any procedures that are developed to implement the policy are documented, publicly available, and not deviated from by the ARIN staff.

3.3. Bottom Up

All policies in the ARIN region are developed by the ARIN community from the bottom up. The community initiates proposals; the ARIN Advisory Council develops the proposals into draft policies which are then discussed by the community. When the Advisory Council determines that the community has reached consensus on a proposal it recommends it to the Board of Trustees who after receipt adopts the draft policy as a policy. The Board of Trustees may not disapprove a policy, but if it has concerns about a draft policy, it may refer it back to the Advisory Council for further work.

4. Policy Development Process Philosophy

Internet number resource management requires good stewardship and judicious management. Thus policies must be developed that ensure fair distribution, meet technical requirements, and enable administration. All policy statements must be clear, complete, and concise. The criteria that are defined must be simple and obtainable.

4.1. Fair Distribution

Although the available amount of Internet number resources appears to be infinitely large, their defined characteristics create a finite resource to which principles of conservation must be applied. These defined characteristics include the recognition of network topology realities. To prevent capricious consumption such as stockpiling, Internet number resource policies provide for the distribution according to demonstrated operational needs.

4.2. Technical Requirements

Policies must meet the technical requirements for the way that they are used in the operational environment. Polices must allow for aggregation of Internet number resources in a hierarchical manner to permit the routing scalability which is necessary for proper Internet routing. However, polices cannot guarantee routability of any particular Internet number resource as that is dependent on the actions of the individual Internet operators. Polices must not create a situation in which Internet number resources intended for public operation are not globally unique.

4.3. Administration

Policies must enable administration and management of Internet number resources that is neutral, impartial, and consistent. Policies must be unambiguous and not subject to varying degrees of interpretation.

5. Terms

Proposal

An idea for a policy that is submitted to the Advisory Council using the policy proposal template.

Draft Policy

A policy proposal that has been developed by the Advisory Council from individual submitted proposals or merged proposals, reviewed by ARIN staff and legal counsel, and posted for discussion on the PPML.

Policy

A draft policy that has the support of the community and the Advisory Council, and has been adopted by the Board of Trustees.

6. The PDP Cycle

The policy development process is composed of a five (5) phase cycle – need, discussion, consensus, implementation, and evaluation.

6.1. Need

The PDP cycle begins with the identification of a need for either a new policy or the revision or elimination of an existing policy. This need is usually determined by a change in technology, a change in the operational environment of the Internet, or the result of the experience of the implementation of an existing policy.

6.2. Discussion

Draft policies are discussed by the community both on the public policy mailing list and in the public policy meeting.

6.3. Consensus

The Advisory Council determines the consensus of the community regarding the draft policy. It evaluates the type and amount of support and opposition to a policy as expressed by the community on the ppml and in the public policy meeting.

6.4. Implementation

The policy is implemented by ARIN staff using published procedures.

6.5. Evaluation

The implementation experience of the policy is periodically reviewed by the staff who reports the results to the Advisory Council and the community.

Part Two – The Policy Development Process

This section provides the details of the ARIN Policy Development Process. A graphical flow depiction of the process is provided at Appendix A. All days are calendar days unless otherwise specified.

1. The Policy Proposal

Policy proposals may be submitted by anyone in the global Internet community except for members of the ARIN Board of Trustees or the ARIN staff. Proposals may be submitted any time to the ARIN staff for delivery to the Advisory Council using the template at Appendix B. There is no deadline for the submittal of policy proposals. Besides delivering the policy proposal to the Advisory Council, the staff will post the policy proposal to the public policy mailing list so that the community will be provided the ability to comment on the proposal. Policy proposals posted to the PPML by individuals will not be considered by the Advisory Council until the proposal is submitted to the staff and delivered to them. Only policy proposals that are developed into draft policies by the Advisory Council, or successfully petitioned, will be discussed for adoption on the PPML and at the public policy meeting.

2. Draft Policy

Upon receipt of a policy proposal, the Advisory Council assumes control of the proposal. The Advisory Council evaluates policy proposals and develops them into technically sound and useful draft policies that, if adopted, will make a positive contribution to the Number Resource Policy Manual. The development of draft policy consists of several steps.

2.1. Clarity & Understanding

Upon receipt of a policy proposal the ARIN staff will work with the proposal originator to ensure there is clarity and understanding of the proposal text. Staff does not evaluate the proposal itself at this time, their only aim is to make sure that they understand the proposal and believe that the community will as well. Staff reports the results of this step to the Advisory Council within 10 days.

2.2. Development & Evaluation

The Advisory Council develops a draft policy. During this effort they may take any action such as rewrite, abandon, merge various proposals, or use a proposal as an idea to generate a draft policy. The Advisory Council must make a decision regarding any policy proposal at their next regularly scheduled meeting that occurs after the Advisory Council receives the Clarity and Understanding Report from staff. If the period before the next regularly scheduled meeting is less than 10 days, then the period may be extended to the subsequent regularly scheduled meeting, but the period shall not be extended beyond 45 days. The Advisory Council will announce its decision regarding any policy proposal once they have decided how to utilize the proposal.

Once the Advisory Council crafts a draft policy it submits it for staff and legal review. This review will be completed within 10 business days. Upon receipt of the staff and legal comments, the Advisory Council examines staff and legal comments to ensure its understanding and resolve any issues that may have

been raised. These comments may cause the Advisory Council to revise its draft policy.

2.3. Discussion & Review

Once the Advisory Council completes its work on a draft policy, to include the staff and legal reviews, it publishes the draft policy and accompanying staff and legal reviews on the PPML for review and discussion. In order for a draft policy to be considered for adoption discussion at a public policy meeting it must be published on the PPML at least 35 days prior to the public policy meeting.

2.4 Discussion Petition

Any member of the community, including a proposal originator, may initiate a Discussion Petition if they are dissatisfied with the action taken by the Advisory Council regarding any specific policy proposal. If successful, this petition will change the policy proposal to a draft policy which will be published for discussion and review by the community on the PPML and at an upcoming public policy meeting.

The Discussion Petition must be initiated within 5 business days of announcement of the Advisory Council's decision regarding a specific policy proposal; the petition must include the proposal and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds (success is support from at least 10 different people from 10 different organizations). In order to be considered at an upcoming public policy meeting, the petition must be successfully completed at least 35 days prior to that meeting.

A successful petition may result in competing versions of the same draft policy. Staff and legal reviews will be conducted and published for successful petitions.

All draft policies that are selected by the Advisory Council or successfully petitioned are published for review and discussion on the public policy mailing list.

3. Public Policy Meeting

Those draft policies that are published at least 35 days prior to a public policy meeting will be placed on the agenda of that meeting for adoption discussion. In the period leading up to the public policy meeting changes may be made to the text of the draft policy. At 10 days prior to the public policy meeting no further changes will be made to the draft policy text so that a single text for each draft policy is considered at the meeting. The text remains frozen until after the completion of the public policy meeting.

The draft policies that have been selected by the Advisory Council are presented by the Advisory Council at the public policy meeting. Draft policies resulting from successful petitions are presented by the petitioner. Competing draft policies, if any, will be discussed together. Discussion and votes at the meeting are for the consideration of the Advisory Council.

4. Consensus

4.1 Discussion Evaluation

At the conclusion of the public policy meeting, the Advisory Council controls all draft policies, including those that were successfully petitioned. The Advisory Council reviews all draft policies and, taking into account discussion on the PPML and at the public policy meeting, decides what to do with each one within 30 days following the public policy meeting. The Advisory Council may take any action such as rewrite, merge, abandon, or send to last call the draft policies. The results of the Advisory Council's decisions are announced to the PPML. Draft policies that are not abandoned or sent to last call are placed on the AC docket for further development and evaluation.

4.2 Last Call Petition

Any member of the community, including a proposal originator, may initiate a Last Call Petition if they are dissatisfied with the action taken by the Advisory Council regarding any draft policy. If successful, this petition will move the draft policy to last call discussion and review by the community on the PPML.

The Last Call Petition must be initiated within 5 business days of the announcement of the Advisory Council's decision regarding a specific draft policy; the petition must include the draft policy and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds (success is support from at least 10 different people from 10 different organizations).

4.3 Last Call

The Advisory Council selects draft policies that have the support of the community and the Advisory Council and sends these draft policies to a last call for review and discussion by the community on the PPML. The last call period will be for a minimum of 10 days. The Advisory Council may decide that certain draft policies require a longer last call period of review, such as those that were revised based on comments received while the text was frozen. If the Advisory Council sends a draft policy to last call that is different from the frozen version, then the Advisory Council will provide an explanation for all changes to the text.

4.4. Last Call Review

Within 30 days of the end of last call the Advisory Council determines consensus for each draft policy by reviewing last call comments, revisiting its decision (the Advisory Council may take any action such as rewrite, merge, or abandon), and determining readiness for consideration by the Board of Trustees. If the Advisory Council modifies a draft policy, it will be sent to another last call or may be placed back on the docket of the Advisory Council for further development and evaluation.

The results of the Advisory Council's decisions are announced to the PPML. The Advisory Council forwards the draft policies that it supports to the Board of Trustees for consideration.

4.5 Board of Trustees Consideration Petition

Any member of the community may initiate a Board of Trustees Consideration Petition if they are dissatisfied with the action taken by the Advisory Council regarding any last call review. If successful, this petition will move the draft policy for consideration by the Board of Trustees. The Board of Trustees Consideration Petition must be initiated within 5 business days of the announcement of the Advisory Council's decision regarding a specific last call review of a draft policy; the petition must include the draft policy and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds (success is support from at least 10 different people from 10 different organizations).

5. Board of Trustees Review

The ARIN Board of Trustees reviews and evaluates each draft policy within 30 days of receipt. The Board examines each draft policy in terms of fiduciary risk, liability risk, conformity to law, development in accordance with the ARIN PDP, and adherence to the ARIN Articles of Incorporation and Bylaws. The Board may adopt, reject or remand draft policies to the Advisory Council. Rejections will include an explanation. Remands will include an explanation and a recommendation. The Board may also seek clarification from the Advisory Council without remanding the draft policy. The results of the Board's decision are announced to the community via PPML.

6. Implementation

The projected implementation date of the policy is announced at the time that adoption of the policy is announced. ARIN staff updates the NRPM to include the adopted policy and implements and publishes a new version of the manual.

7. Special Policy Actions

7.1. Emergency PDP

The Board of Trustees may initiate the Emergency PDP by declaring an emergency and posting a draft policy to the PPML for discussion for a minimum of 10 business days. The Advisory Council will review the draft policy within 5 business days of the end of the discussion period and make a recommendation to the Board of Trustees. If the Board of Trustees adopts the policy, it will be presented at the next public policy meeting for reconsideration.

7.2. Policy Suspension

If, after a policy has been adopted, the Board receives credible information that a policy is flawed in such a way that it may cause significant problems if it continues to be followed, the Board of Trustees may suspend the policy and request a recommendation from the Advisory Council on how to proceed. The recommendation of the Advisory Council will be published for discussion on the PPML for a period of at least 10 business days. The Board of Trustees will review the Advisory Council's recommendation and the PPML discussion. If suspended, the policy will be presented at the next scheduled public policy meeting in accordance with the procedures outlined in this document.

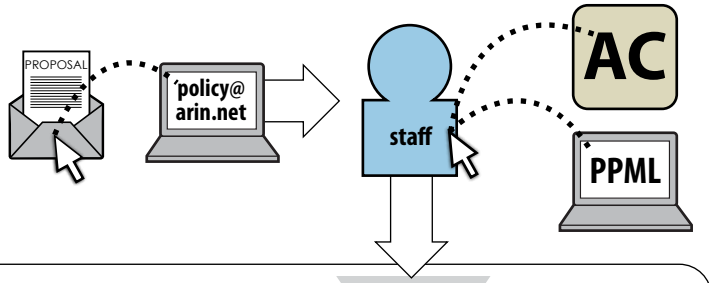
If, after a policy has been ratified and put into effect, the Board of Trustees receives credible information that a policy is flawed in such a way that it may cause unforeseen problems if it is continued to be followed, the Board may suspend the policy and request a recommendation from the ARIN Advisory Council on how to proceed. The Advisory Council's recommendation will be posted for discussion on the Public Policy Mailing List for a period of at least ten working days.

Appendix A: PROCESS FLOW CHART

1 Proposal

Submittal

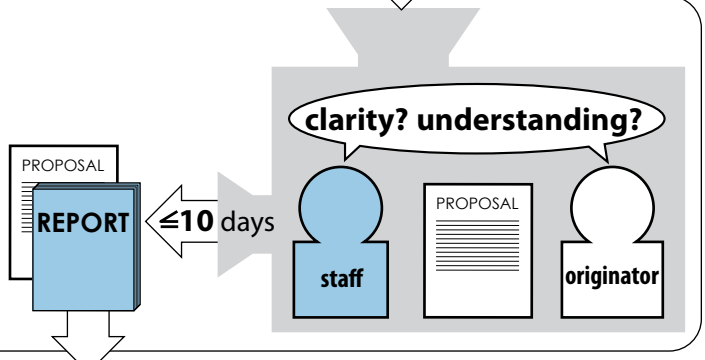
- By anyone at anytime (not Staff or BoT)
- Submit template to policy at ARIN
- Staff posts the proposal to PPML and forwards it to the AC.



2 Draft Policy

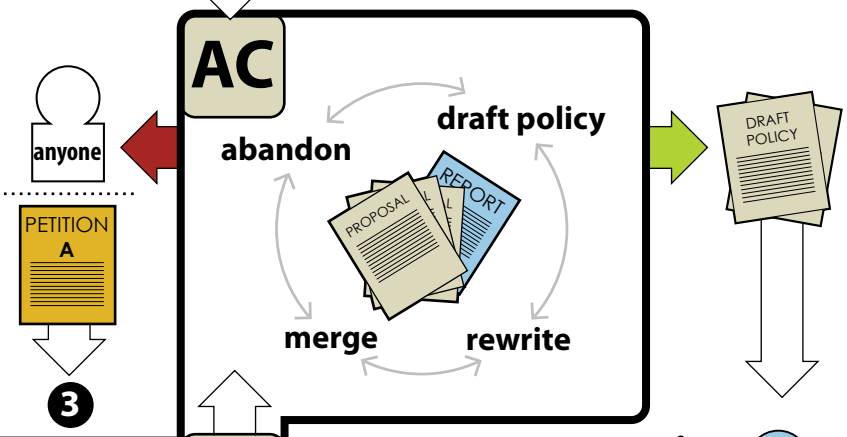
a. Clarity & Understanding

- Staff and originator work together to ensure clarity and understanding of what is being proposed.
- Staff does not evaluate the proposal.
- Staff reports the result of this step to the AC within 10 days.



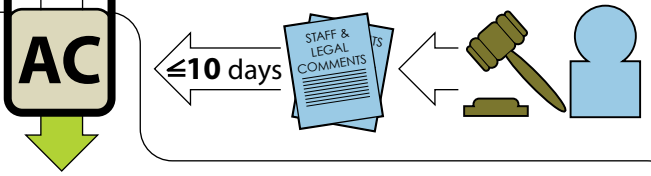
b. Development & Evaluation

- AC assumes control of all proposals.
- AC develops and evaluates proposals to only bring forth technically sound policies that make a positive contribution to the Number Resource Policy Manual. The AC may rewrite, merge, abandon, etc.; for example, they may use a proposal as an idea to generate a draft policy.
- AC must submit for Staff and Legal review if it intends to move a draft policy forward. Review comments must be understood and addressed. Text may be revised in response.
- AC must make a decision regarding any proposal within 30 days of receipt (approx.).
- Decisions posted to PPML.



c. Discussion & Review

- AC selects sound and useful draft policies for community discussion.
- Relevant staff and legal comments are published with each draft policy.
- Anyone may initiate Discussion Petition (Petition A*) if dissatisfied with AC action.
- Staff and legal reviews are conducted for successful petitions.
- Draft policy is posted to PPML for community discussion and review.



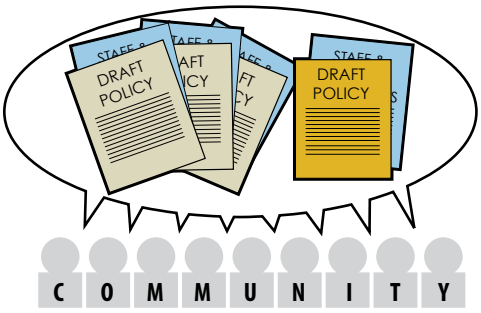
AC selects...

3 Public Policy Meeting

- The PPM agenda will contain those draft policies that will have been on the PPML for at least 35 days prior to the meeting.

Draft policy text is frozen 10 days prior to PPM so that a single text for each draft policy is considered at the meeting.

- The AC presents draft policies at the Public Policy Meeting; the successful petitioner presents their draft policy. Competing proposals will be discussed together.



3 Public Policy Meeting (cont.)

Discussion and votes at the meeting are for the consideration of the AC.

4 Consensus

a. Discussion Evaluation

- AC controls all draft policies.
- AC considers list and meeting discussion and may rewrite, merge, abandon, send to last call, etc.
- Draft policies not abandoned or sent to last call are placed on AC's docket for further development and evaluation.
- AC's decisions are posted to PPML.
- Anyone may initiate Last Call Petition (Petition B*) if dissatisfied with AC action.
- AC must make a decision within 30 days of the PPM.

b. Last Call

AC selects draft policies that have support both in the community and the AC and sends them to a last call for comments on the PPML for at least 10 days. If text is different from the frozen version, AC will explain.

c. Last Call Review

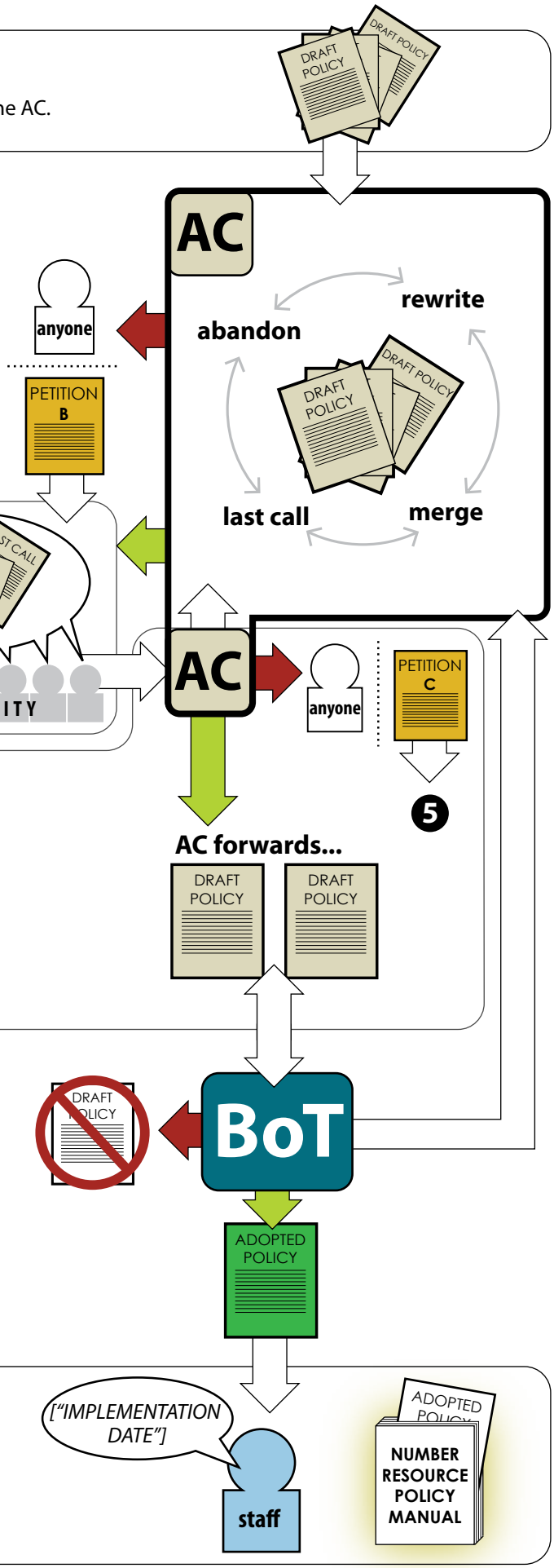
- AC determines consensus for each draft policy.
  - Reviews last call comments
  - Revisits earlier decision
  - Determines readiness for consideration by BoT
- AC may revise and repost to last call.
- AC's decisions are posted to PPML.
- Anyone may initiate BoT Consideration Petition (Petition C*) if dissatisfied with AC action.
- AC determines consensus within 30 days of the end of Last Call.

5 Board of Trustees Review

Within 30 days of receipt the Board examines each draft policy in terms of fiduciary risk, liability risk, conformity to law, development in accordance with the ARIN PDP, and adherence to the ARIN Articles of Incorporation and bylaws. The Board may adopt, reject or remand draft policies to the AC. Rejections will include an explanation. Remands will include an explanation and a recommendation. The Board may also seek clarification from the AC without remanding the draft policy. The results of the Board's decision are announced to the community via PPML.

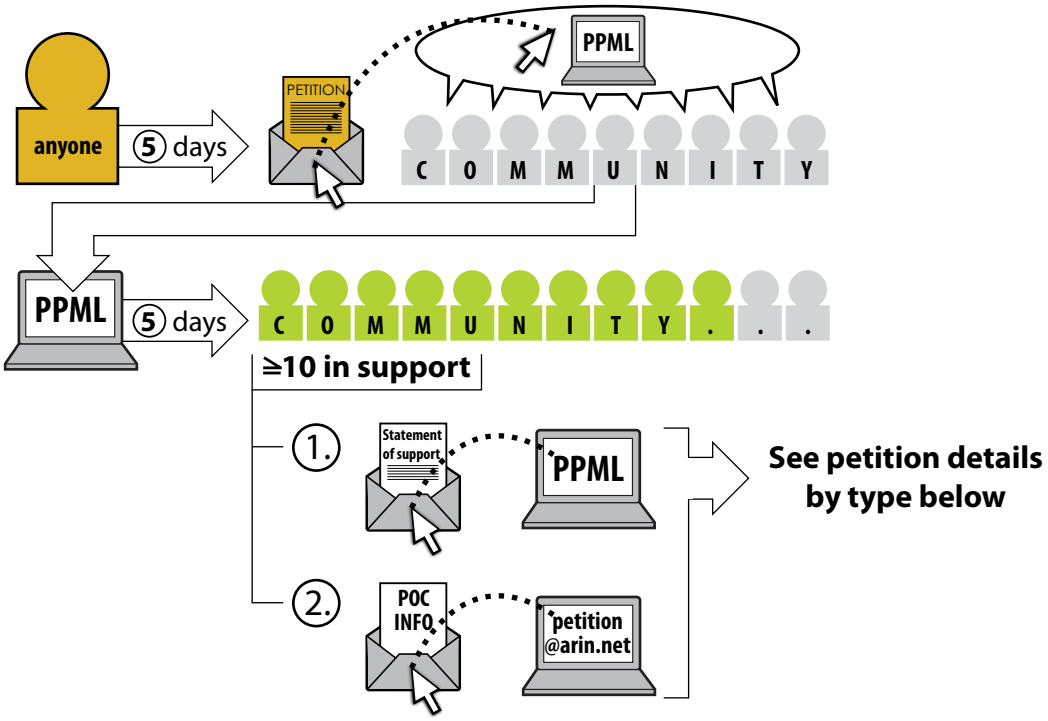
6 Implementation

The expected implementation date of the policy is announced at the time that adoption of the policy is announced. ARIN staff updates to include the adopted policy into the Number Resource Policy Manual and implements and publishes a new version of the manual.



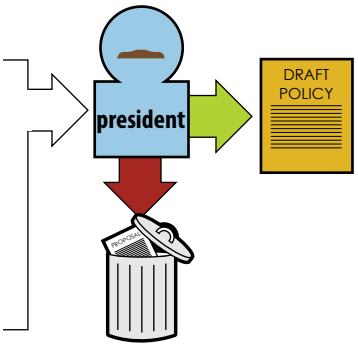
*See "ARIN PDP Petitions"

Appendix A: PDP PETITIONS



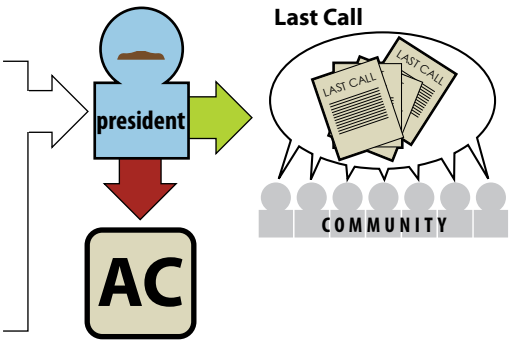
PETITION A

Discussion Petition - If any member of the community, including a proposal originator, is dissatisfied with the AC action on a policy proposal they can initiate a Discussion Petition to move this particular proposal to the PPML for discussion as a draft policy. Anyone may initiate the petition on the PPML (within 5 business days of publication of the AC's decision); the petition must include the proposal and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds. Success is support from at least 10 different people from 10 different organizations.



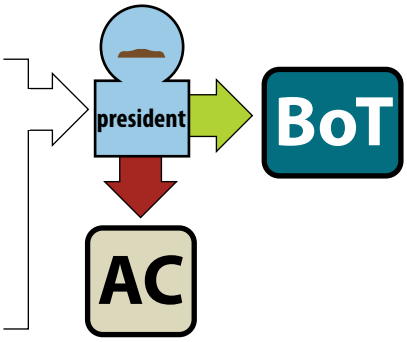
PETITION B

Last Call Petition - If any member of the community, including a proposal originator, is dissatisfied with the AC action on a draft policy they can initiate a Last Call Petition to move this particular draft policy to the PPML for last call. Anyone may initiate the petition on the PPML (within 5 business days of the publication of the AC's decision); the petition must include the draft policy and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds. Success is support from at least 10 different people from 10 different organizations.



PETITION C

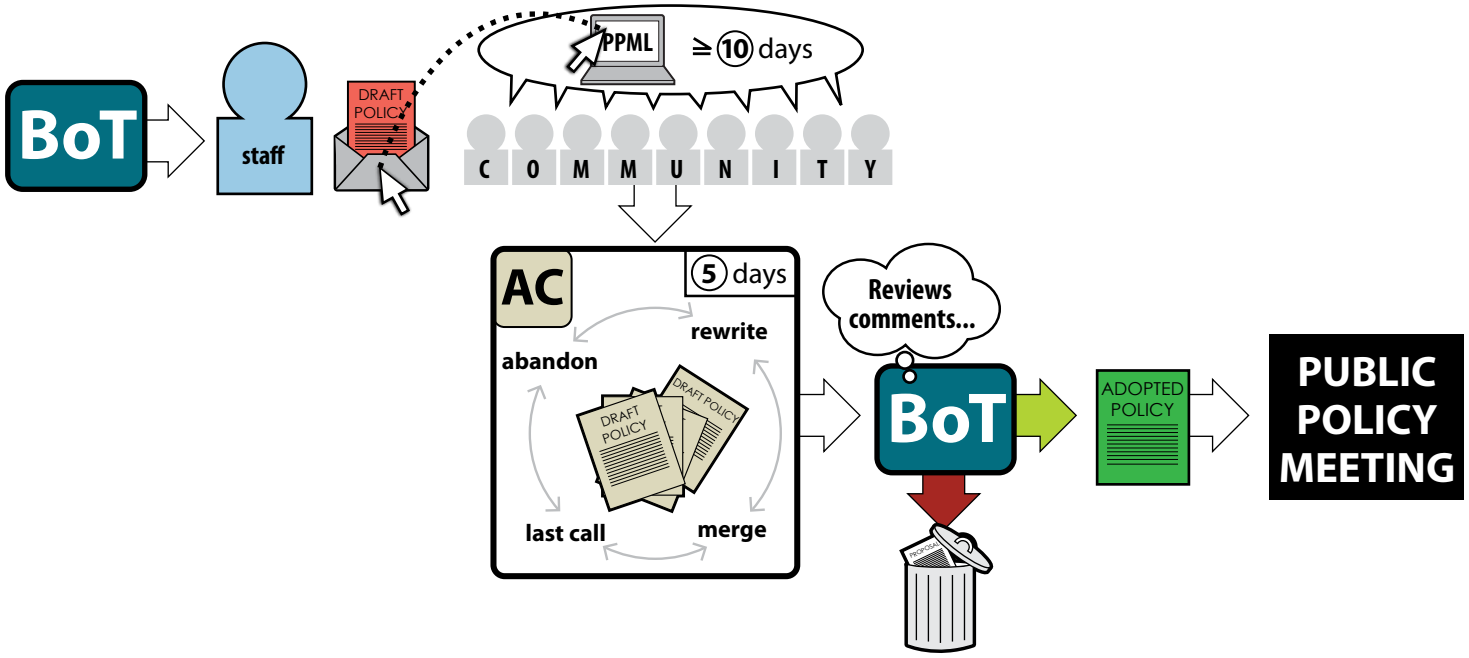
BoT Consideration Petition - If any member of the community is dissatisfied with the AC action on a draft policy they can initiate a Board of Trustees Consideration Petition to move this particular draft policy for consideration by the Board of Trustees. Anyone may initiate the petition on the PPML (within 5 business days of the publication of the AC's decision); the petition must include the draft policy and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds. Success is support from at least 10 different people from 10 different organizations.



Appendix A: SPECIAL BoT POLICY ACTIONS

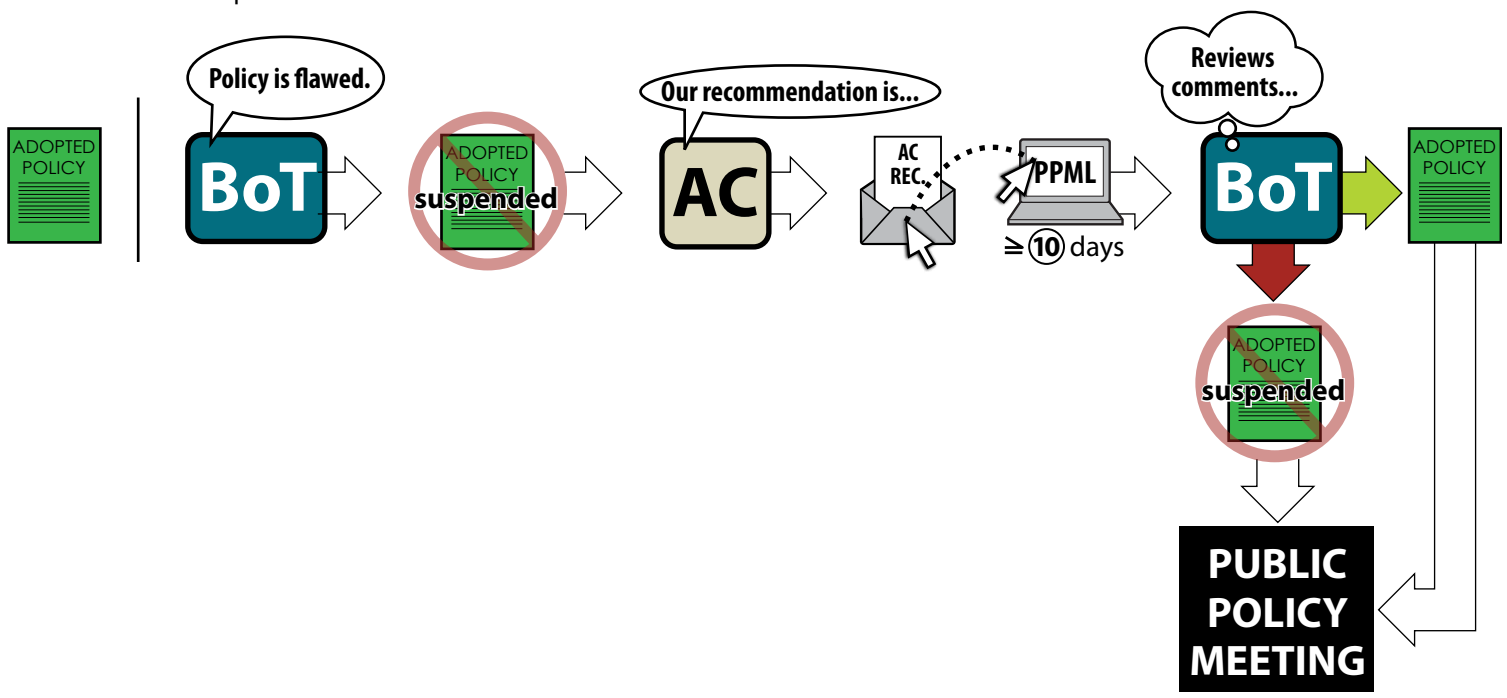
Emergency PDP

The Board of Trustees may initiate the Emergency PDP by declaring an emergency and posting a draft policy to the PPML for discussion (minimum 10 business days). The AC will review the draft policy within 5 business days of the end of the discussion period and make a recommendation to the BoT. If the BoT adopts the policy, it will be presented at the next PPM for reconsideration.



Policy Suspension

If, after a policy has been adopted, the BoT receives credible information that a policy is flawed in such a way that it may cause significant problems if it is continued to be followed, the BoT may suspend the policy and request a recommendation from the AC on how to proceed. The AC's recommendation will be posted for discussion on the PPML for a period of at least 10 business days. The BoT will review the AC's recommendation and the list discussion. If suspended, the policy will be presented at the next scheduled PPM in accordance with the procedures outlined in this document.



Appendix B: PROPOSAL TEMPLATE

Guidelines for Completing the ARIN Policy Proposal Template are available at: **https://www.arin.net/policy/pdp_appendix_b.html**.

Template: ARIN-POLICY-PROPOSAL-TEMPLATE-2.0

1. Policy Proposal Name:
2. Proposal Originator
    1. name:
    2. email:
    3. telephone:
    4. organization:
3. Proposal Version:
4. Date:
5. Proposal type:

   new, modify, or delete.
6. Policy term:

   temporary, permanent, or renewable.
7. Policy statement:
8. Rationale:
9. Timetable for implementation:

END OF TEMPLATE

ARIN
American Registry for Internet Numbers