



Policy Implementation and Experience Report

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Policies Reviewed

- IPv4 Waiting List/Reserved Pool Requests From Multiple Org IDs
- Reassignments/Reallocations from 4.10 Reserved Space
- 4.1.7. Reserved Pool Replenishment

IPv4 Waiting List/ Reserved Pool Requests From Multiple Org IDs



Policies Reviewed

IPv4 Waiting List (4.1.8)

- *Simultaneous requests are not allowed: an organization currently on the waitlist must wait 90 days after receiving a distribution from the waitlist or IPv4 number resources as a recipient of any transfer before applying for additional space*

Critical Infrastructure (4.4)

- *Multiple allocations may be granted in certain situations*

IPv6 Transition (4.10)

- *Applicant may not have received resources under this policy in the preceding six months*

All three policies limit the rate at which a single org can request IPv4 addresses



Current Staff Practice

Multiple Org IDs are permitted when necessary for reasons such as:

- Separate divisions that operate independently of each other.
- Geolocation or similar regional considerations.
- When evaluating eligibility for the IPv4 Waiting List and reserved pool requests, multiple Org IDs are treated as a single organization.

Issues Observed

Organizations are registering shell companies in order to create multiple Org IDs for the purpose of bypassing the Waiting List and reserve pool policies.

Current staff practice is, when identified, these Org IDs are audited under Section 12 of the NRPM. If found to be in violation of policy, then resources previously allocated are reclaimed in accordance with the Registration Services Agreement.

- This is resource-intensive (verification of individuals)
- Relies on manual processes and observations of individual analysts

Other policy restrictions may not be effective

- Five year waiting period can be bypassed with a merger and acquisition (M&A) transfer
- Leasing policy is difficult to detect and enforce
- Trivial for each Org ID to meet policy requirements

Questions for the community

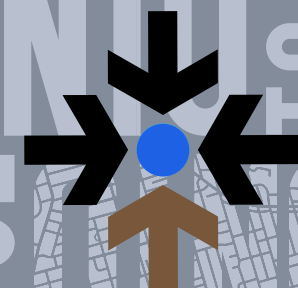
Are the current policies and practices aligned with what the community wants?

Context: This question aims to assess whether the existing policies around IPv4 address allocation, waiting lists, and reserved pools are meeting the needs and expectations of the community, especially given the ongoing IPv4 exhaustion. Are these policies still serving the community effectively?

Are additional policy measures needed to prevent or deter this behavior?

Context: This question addresses specific behaviors, such as the creation of multiple Org IDs to bypass policy requirements. Is this an issue the community feels should be more tightly regulated, and are the current deterrents effective enough?

Reassignments/Reallocations from 4.10 Reserved Space



Policy Reviewed

4.10. Dedicated IPv4 Block to Facilitate IPv6 Deployment

"Allocations and assignments from this block must be justified by immediate IPv6 deployment requirements. Examples of such needs include: IPv4 addresses for key dual stack DNS servers, and NAT-PT or NAT464 translators."

Issues Observed

Requesters receive a 4.10 block and then reassign or reallocate that block to another organization.

Organizations reassign or reallocate space to IPv4 leasing providers and other organizations.

Organizations request additional 4.10 /24s under the 4.5 Multiple Discrete Networks policy to deploy individual servers across geographically diverse locations.

Questions for the community

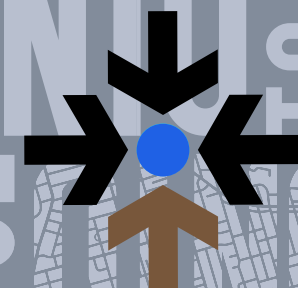
Should reassignments or reallocations of 4.10 space to downstream customers/organizations be permitted?

Context: Should organizations be allowed to reallocate/reassign 4.10 space, or should an organization be required to request 4.10 space directly from ARIN?

If permitted, should ARIN staff treat reassigned/reallocated 4.10 space as utilized when evaluating compliance with policy requirements?

Context: This question addresses how ARIN should account for 4.10 space that has been reassigned or reallocated, especially regarding utilization metrics and policy compliance.

4.1.7. Reserved Pool Replenishment



Section 4.1.7: Reserved Pool Replenishment

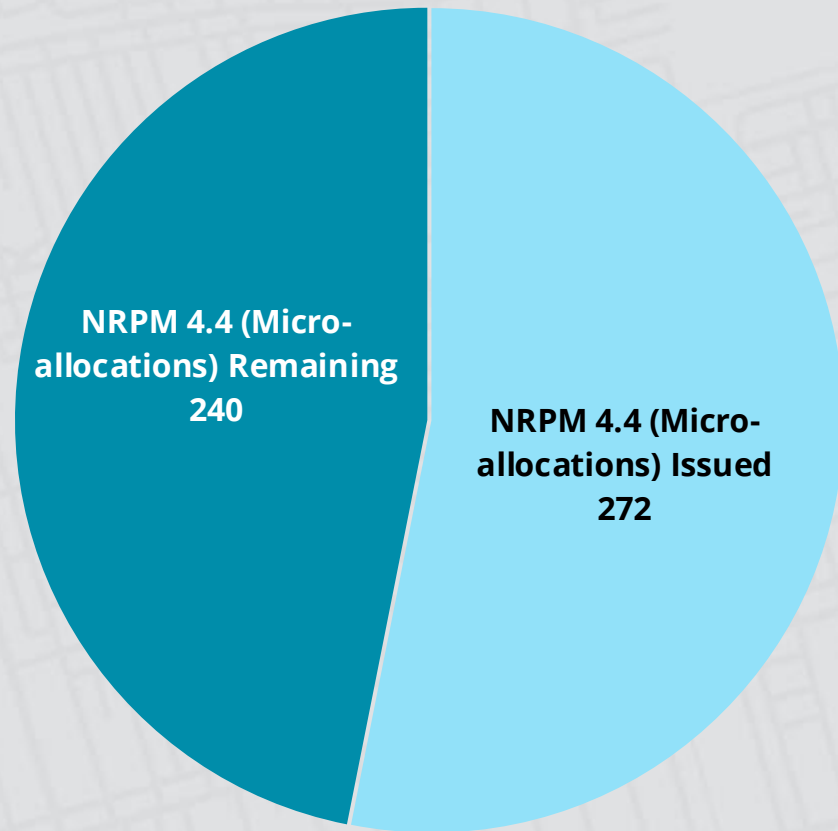
This section describes the process for replenishing reserved IP address pools, including those created under sections 4.4 and 4.10, as well as any future reserved pools.

- **4.4 Micro-Allocations:** A /15 block of IP address space is reserved for Critical Internet Infrastructure providers, such as Internet Exchange Points (IXPs), core DNS service providers, RIRs, and IANA.
- **4.10 Dedicated IPv4 Block for IPv6 Deployment:** A /10 block of IPv4 address space is reserved to facilitate the deployment of IPv6.

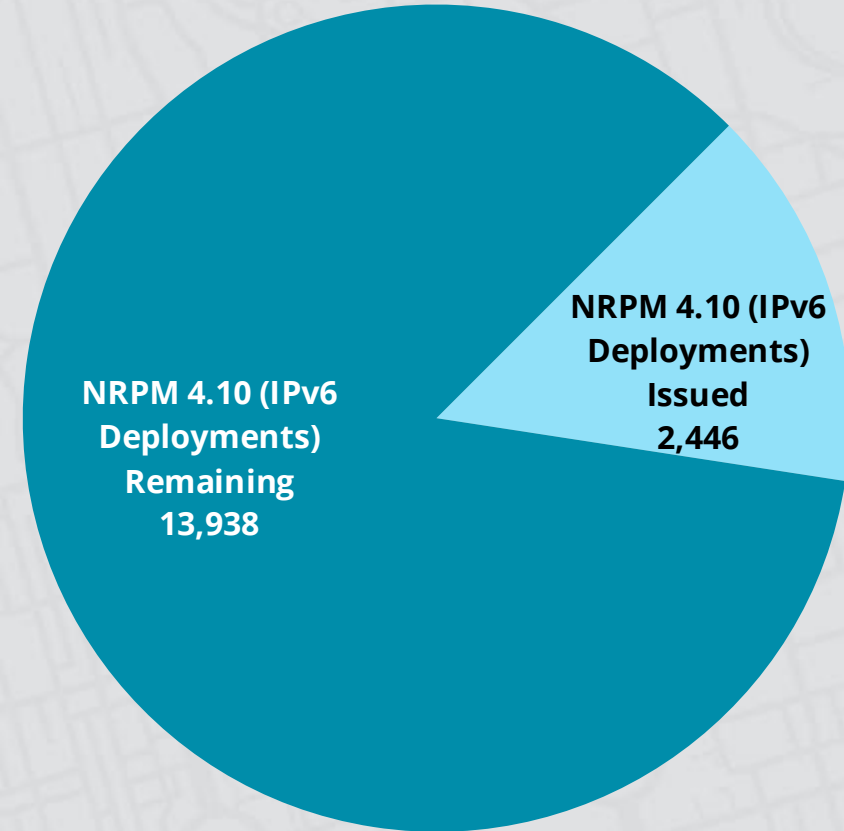
Replenishment Precedence: The priority for replenishing these pools is based on which pool has the lowest percentage of a projected three-year supply remaining.

Current Status

**IPv4 Reserved Pool Status -
NRPM 4.4 (Micro-allocations)**



**IPv4 Reserved Pool Status -
NRPM 4.10 (IPv6 Deployments)**



Issues Observed

Reserved Pool Replenishment Impact: Section 4.1.7 requires ARIN to use available IPv4 resources to replenish reserved pools (such as 4.4 and 4.10) to maintain a three-year supply. This process would reduce the number of available IPv4 blocks for the general IPv4 Waiting List, which may result in fewer, or no Waiting List requests being filled.

IPv4 Waitlist Statistics:

- As of **7 October**, there are **713 requests** on the IPv4 Waiting List.
- A total of **1,727 /24s** would be required to fulfill all the current requests on the waitlist.
- Over the last two years, each **quarterly disbursement** has been around **95 /24s** on average.

Issues Observed

Reserved Pool Replenishment

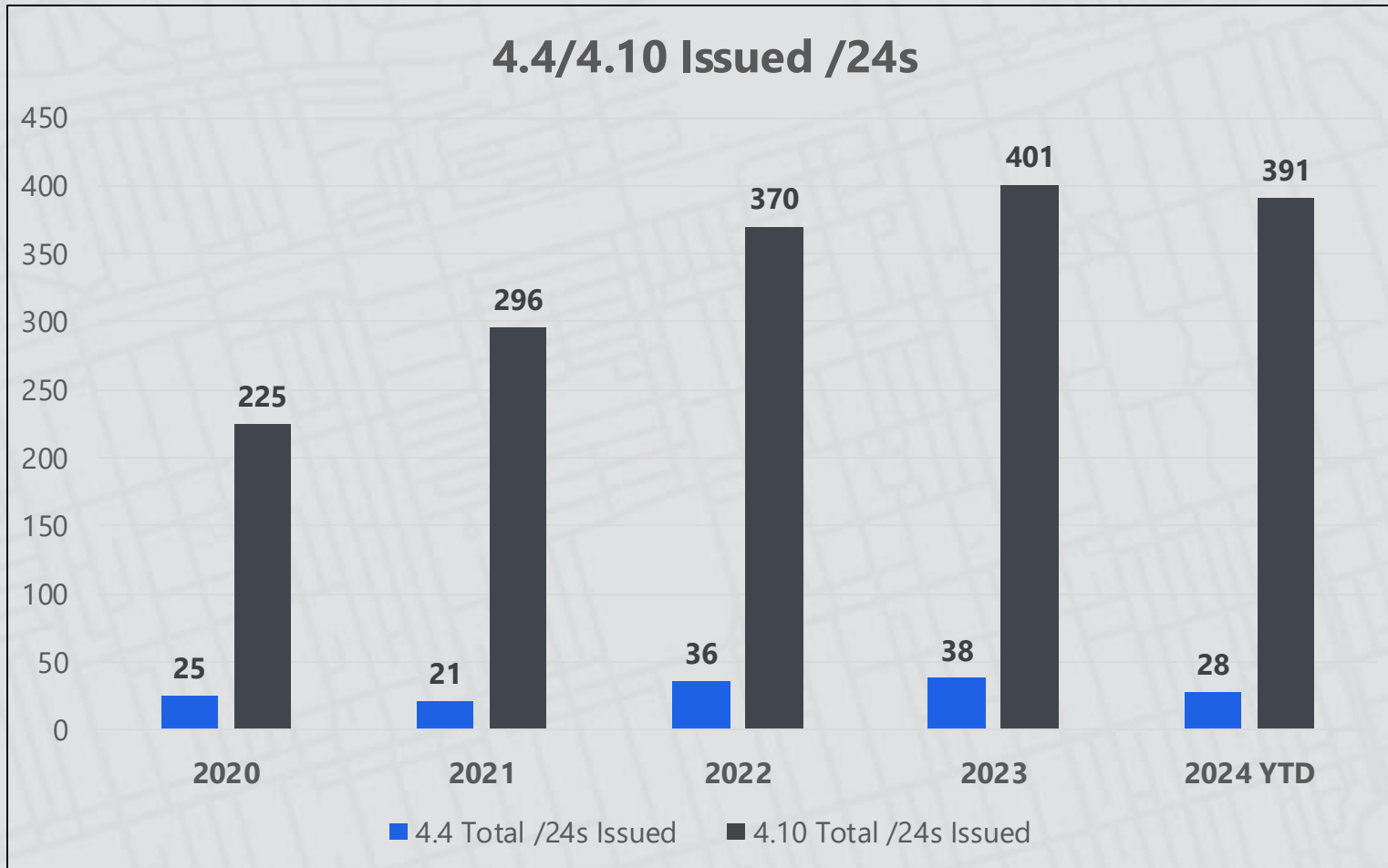
Impact: Section 4.1.7 requires ARIN to use available IPv4 resources to replenish reserved pools (such as 4.4 and 4.10) to maintain a three-year supply. This process would reduce the number of available IPv4 blocks for the general IPv4 Waiting List, which may result in fewer, or no Waiting List requests being filled.

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Trends

Beginning in 2021, there has been a steady rise in the number of /24s issued following a previously consistent rate of fulfilled requests.



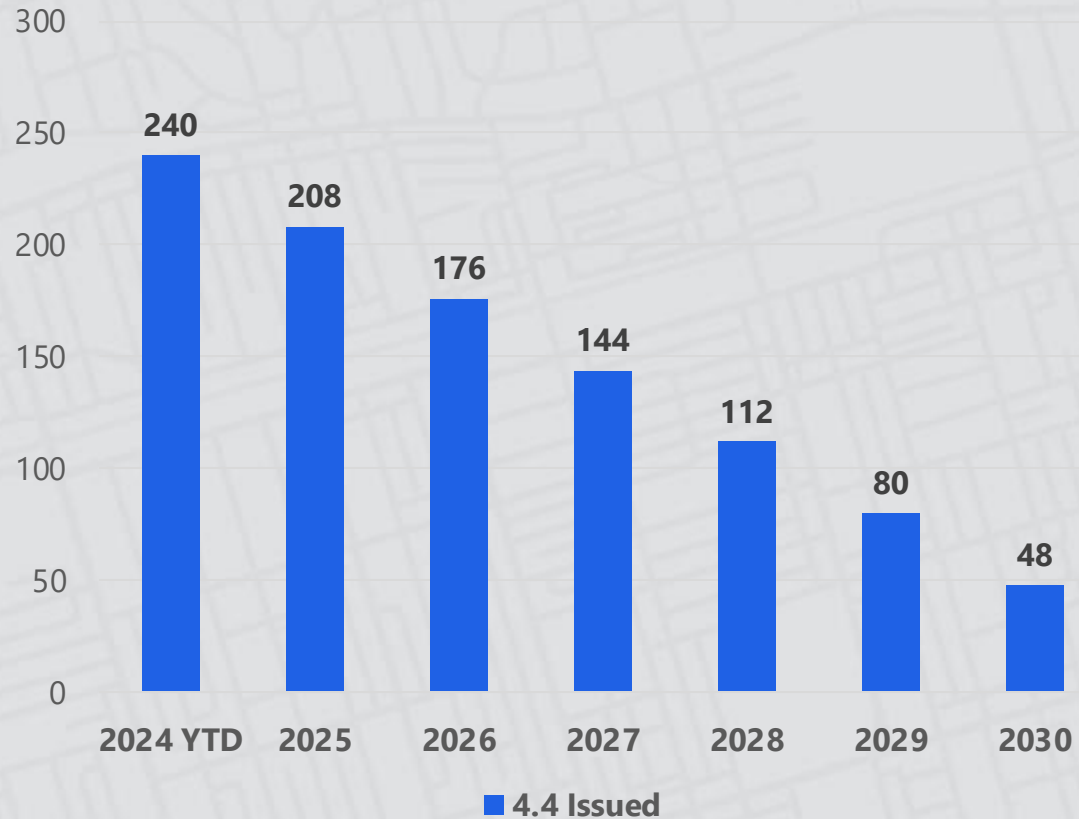
3-Year Supply Requirements (/24s)*

- **4.4:** Currently at ~95
- **4.10:** Currently at ~1,067

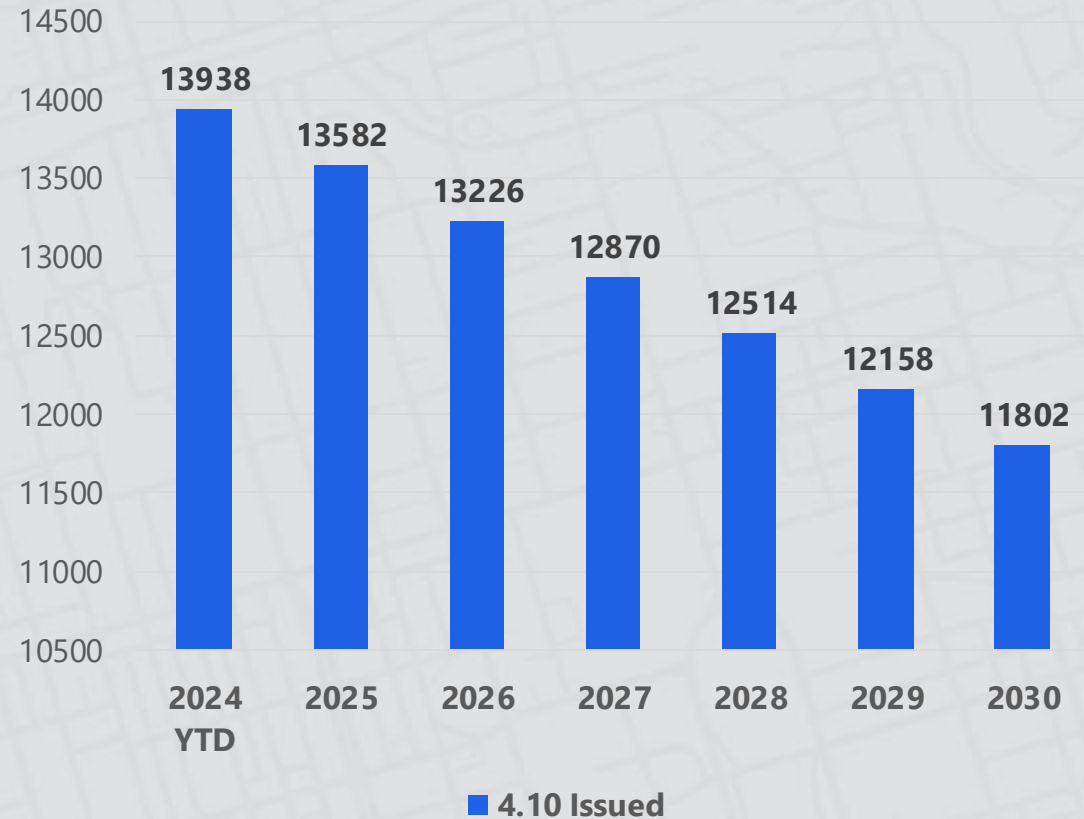
**Based off conservative moving average of years 2021 – 2023*

Projections

4.4 Issued /24s



4.10 Issued /24s



4.4 Pool would require replenished in **2028-2029**.

4.10 Pool would not need replenishment for **25+ years**.



Questions for the community

Should Section 4.4 and/or Section 4.10 replenishment policies be updated to address evolving IPv4 scarcity?

- **Context:** Given the current strain on IPv4 resources and the need to balance critical infrastructure with general allocations, what changes could be made to these replenishment policies to better align with current demand? For example, should there be longer intervals between replenishments, or smaller allocations?

Should Sections 4.4 (Micro-Allocations) and 4.10 (IPv6 Deployment) be treated differently in terms of replenishment given the significant difference in pool sizes and usage?

- **Context:** The scale of the 4.4 pool (reserved for critical infrastructure) is much smaller than the 4.10 pool (dedicated to IPv6 deployment). Given this disparity, should ARIN apply different rules or criteria when deciding how to replenish each pool?

Questions for the community (cont'd)

Should the replenishment of the 4.4 and 4.10 pools continue to take priority over fulfilling requests on the IPv4 Waiting List, or should Waiting List fulfillment take precedence?

- **Context:** As the IPv4 Waiting List grows, fulfilling replenishment requests for Sections 4.4 and 4.10 could significantly reduce the resources available for the list. Should ARIN adjust its priorities to ensure the IPv4 Waiting List is fulfilled first or continue prioritizing pool replenishments?

Thank you

Questions and Comments?

