

NRO Response to IANA's proposed implementation of the Global Policy for Post Exhaustion IPv4 Allocation Mechanisms

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The NRO EC has reviewed IANA's proposed implementation of the Global Policy for Post Exhaustion IPv4 Allocation Mechanisms and we would like to advise you of our response.

Phase One: "Create the "Recovered IPv4 Pool"

We understand that IANA is considering several implementation options:

- Increase the granularity of the existing IPv4 Registry and add the returned IPv4 address space to this registry (the "single registry" approach)
- Utilize the existing IPv4 registry by creating software that would allow multiple "views" of an enhanced IPv4 unicast registry ("expanded single registry with multiple views" approach)
- Establish a separate registry for the returned IPv4 address space, with the current IPv4 Address Allocation Registry remaining unchanged (the "multiple registries" approach)
- Use two sub-registries; one for the current recovered IPv4 Pool and the other as a record of allocations made from the recovered IPv4 Pool ("multiple registries with sub-registries" approach)

Upon careful review, the NRO feels that the most efficient and workable option would be the "multiple registries" approach. This is where IANA establishes a separate registry to record the current contents in the IANA-administered recovered IPv4 address pool only, and once space is allocated from this pool by IANA to an RIR, the corresponding registry entry would be erased from this registry. It is noted that the NRO would have no problem if IANA chose to also maintain a registry with the historical information of all the IPv4 address space that has been recovered and re-allocated under this global policy, as long as this registry is linked separately from the registry that records the current contents of the recovered IPv4 address space pool.

The NRO believes that the details of any re-allocations made by the RIRs from the recovered pool should be managed at the RIR level, which is consistent with the way it is currently managed. Using the "multiple registries" approach will make a clear distinction between the IPv4 address space that was issued in the past (static information) and the IPv4 address space that has been returned and is being temporarily held by IANA (dynamic information) until reissuance to an RIR.

Utilizing any of the other options described above would add a level of granularity that

already exists in each of the RIR databases today, resulting in the duplication of information. Additionally, it would add a high level of complexity to the process and would require close coordination between IANA and the RIRs, particularly in the case of inter-RIR transfers.

We would also like to point out that in some cases, the "Designated RIR" of a /8, identified in the "Designation" column, could change as the result of a partial or total reallocation of that block. In those cases, the NRO will be responsible for tracking that and informing IANA so that this information can be updated in the IANA registry.

Phase Two: Allocating from the "Recovered IPv4 Pool"

IANA has presented two different options, one being a software selection process and the other being a manual selection process. The NRO has no strong opinion about how IANA decides to allocate from the recovered IPv4 Pool. We will support whatever method IANA decides is sufficiently cost effective and efficient.