Soft Landing, Recovered Space and Priority

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@JordiPalet

(jordi.palet@theipv6company.com)

Summary of the problem

AFRINIC entered Soft Landing Phase 2 in 2020 when it had no more than one /11 of non reserved IPv4 space remaining in the final /8. Subsequently, AFRINIC also recovered more than 3 million IPv4 addresses.

According to AFRINIC staff, at the current delegation rate:

- Approximately 2 years are estimated to deplete the 783,872 IPv4 addresses currently available
- An additional ~3 years are estimated to deplete the /12 block (around 1 million addresses) reserved by policy for future use
- Several Resource Members have received more than 8 × /22 within a calendar year by submitting multiple requests up to the maximum /22 prefix size.

The staff asked to the community: Should the recovered 3+ million IPv4 addresses:

- Automatically fall under the existing Soft-Landing Phase 2 conditions? OR
- Be subject to a new policy governing how recovered IPv4 space is handled?

Further to that, this policy also resolves possible discrepancies among the Soft-Landing policy and other sections of the CPM.

Addressing the problem

This proposal suggests that the Soft-Landing policy shall be irreversible and consequently the recovered addresses fall under the existing Soft-Landing Phase 2 existing conditions.

The reasons for this consideration are:

- The Internet in Africa can still increase the delegation rate, as the different economies keep growing, so probably the burn rate will be faster than forecasted.
- IPv6 deployment will still need, even when using IPv6-only/IPv6-Mostly scenarios, which are the recommended ones, small IPv4 pools (/22-/24) for every site.
- An alternative policy to amend the Soft-Landing can take a longer discussion time in the community, so meanwhile, this proposal fills the gap and doesn't prevent a better choice over the time.

Regarding the discrepancies with other sections of the CPM, the proposal suggests that Soft-Landing is prioritized over the other CPM sections in case of conflict or discrepancies.

Some text reworded for clarity.

Proposed Text (1)

5.4 Soft Landing

This section describes how AFRINIC shall assign, allocate, and manage IPv4 resources during the "Exhaustion Phase" which begins when AFRINIC first needs to assign or allocate IP addresses from the final /8 block of IPv4 address space.

5.4 Soft Landing

This section shall govern the manner in which AFRINIC assigns, allocates, and administers IPv4 resources during the “Exhaustion Phase”, which phase shall commence upon AFRINIC first assigning or allocating IPv4 address space from the final /8 block of IPv4 resources available to it.

Upon the commencement of any Soft-Landing exhaustion phase, such phase shall be deemed final and irreversible. Any IPv4 resources returned or recovered thereafter, irrespective of their size or original pool, shall be returned to the “available space” pool only following a quarantine period of twelve (12) months. AFRINIC may reduce the quarantine period, for example when “available space” is below a /13 or other operational reasons.

For clarity, “available space” pool is the total addresses available, regardless of being from the last /8, or other blocks.

In the event of any inconsistency or conflict between the provisions of the Soft-Landing framework and any other provision of the CPM relating to allocation criteria, the provisions of the Soft-Landing framework shall prevail to the extent of such inconsistency.

Proposed Text (2)

5.4.7.1 A /12 IPv4 address block will be in reserve out of the final /8

This /12 IPv4 address block shall be preserved by AFRINIC for some future uses, as yet unforeseen. The Internet is innovative and we cannot predict with certainty what might happen. Therefore, it is prudent to keep this block in reserve, just in case some future requirement creates a demand for IPv4 addresses.

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Once IPv4 addresses are recovered, the /12 from the final /8 can be released and refilled with the recovered addresses from any other “available space”, even if they are under quarantine period.

Proposed Text (3)

5.5.1.2.1 AFRINIC's minimum allocation is /22 or 1024 IPv4 addresses

Removed (5.4.3.2 supersedes it)

5.5.1.4.1 An LIR may receive an additional allocation when about 80% of all the address space currently allocated to it has been used in valid assignments and/or sub-allocations

Removed (5.4.6.1 supersedes it)

5.6.3 Additional PI Assignment

Removed (5.4.6.1 supersedes it)

Proposed Text (4)

5.5.1.9 Utilisation

Immediate utilisation of assignments should be at least 25% of the assigned space. After one year, unless special circumstances are defined, it should be at least 50%

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Immediate utilisation of assigned address space shall be not less than twenty-five per cent (25%) of the assigned resources. Unless exceptional circumstances are demonstrated, utilisation shall reach at least fifty per cent (50%) within eight (8) months from the date of assignment.

Proposed Text (5)

5.5.1.13.3.2. The LIR cannot make any sub allocation to the End User above their SAW in a 12 month period (1 year). At the end of a calendar year from the approval of a SAW, the SAW is refreshed for one more year. In case the LIR's SAW is exhausted for a particular End User, approval must be sought from AFRINIC for any other sub allocation to the same End User.

5.5.1.13.3.2. An LIR shall not make any sub-allocation to an End User in excess of the applicable SAW during any period of eight (8) months. Upon expiry of the relevant eight (8)-month period from the date of approval of the SAW, the SAW shall automatically renew for a further period of eight (8) months.

Where the SAW applicable to a particular End User has been exhausted, the LIR shall obtain prior approval from AFRINIC before effecting any further sub-allocation to that End User.

References

- In other regions, it has not been contemplated a reversion of the policies for exhaustion. When needed the exhaustion policies have been modified to match the updated community view.

IA Inputs