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PROPOSAL DATA:

Proposal Title: Creation of an IPv4 reserve exclusively for IPv6 deployment
Policy Proposal Type: LACNIC
Id: LAC-2014-01
Version: 1

PROPOSAL SUMMARY:

This proposal seeks to reserve a contiguous /14 IPv4 address block to be used exclusively by members who justify the need for IPv4 addresses for the immediate deployment of IPv6.

JUSTIFICACION:

The current gradual IPv4 resource exhaustion policy (Section 11 of the Policy Manual) creates a reserve equivalent to a /11 block of IPv4 addresses. This space is enough to meet 1024 new resource requests submitted by current members and 1024 requests submitted by new members, if all requests were to be for a /22. Considering the current growth rate of LACNIC membership (600 new members per year), it is estimated that the final address space reserved for new members will be depleted less than two years after policy 11.1 comes into force. Concerned that this reserve will be exhausted very quickly, an amendment to LAC-2013-03v2 was proposed to increase the reserved space to a /10.

According to LACNIC's official statistics, there was a 50% increase in requests for IPv4 resources between 2012 and 2013, while during the same period the number of applications for new AS's remained practically unchanged (and even exhibited a 4% reduction). These statistics show that existing members are requesting increasing amounts of IPv4 resources, and this demand will grow even more when policy 11.2 comes into force. Even if it is increased to a /11, the reserve will quickly be depleted due to an increased distribution rate. Even with the addition of new resources recovered under policy 11.3, the resources described in policy 11.1 will also be quickly depleted as new members request resources in fear of IPv4 exhaustion and the increasing difficulty they will encounter when trying to obtain new address from their providers.

With rare exceptions, the rate of IPv6 deployment for end users in most countries within LACNIC's service region is negligible, although there is a considerable resource distribution rate. This shows a certain lack of interest or motivation on the part of the region's organizations (largely Internet access providers) to deploy IPv6. Recent studies show that only 0.11% of all traffic within Latin America and the Caribbean is IPv6 traffic.

Considering how close we are to IPv4 resource exhaustion as well as the slow transition to IPv6, many new members will only receive IPv6 resources, and this will occur at a time when it will still be necessary to communicate with the IPv4 Internet. These members will need small amounts of IPv4 addresses to implement translation mechanisms (e.g., NAT-PT or NAT464) and/or services (e.g., dual stack DNS). This proposal aims at creating an IPv4 address reserve for this purpose only, allowing allocations of block sizes greater than or equal to a /28 and smaller than or equal to a /24. Applicants shall justify the resources, detailing how they will be immediately used (for example, describing which translation mechanisms will be used, how they will be implemented, etc.).

This proposal requests a contiguous address block to facilitate aggregation, considering that it anticipates the distribution of smaller blocks. A contiguous block can also help identify addresses belonging to this space for treatment and filtering purposes. A /14 address block allows providing up to 16 384 new members with a /28 or 1024 new members with a /24. The impact of 16 384 new prefixes in the global IPv4 routing table is negligible by today's standards.

PROPOSAL TEXT:

The proposal concerns Section 11 of the Policy Manual, where a new item is added, as follows:

11.4. Special IPv4 reserve exclusively for allocations/assignments for IPv6 deployment

1. LACNIC will reserve a pool of contiguous addresses equivalent to a /14 to be used exclusively for members justifying their immediate need for IPv6 deployment.

2. Applicants must have an IPv6 block assigned by LACNIC or shall simultaneously request an IPv6 block in accordance with the applicable policy.

3. LACNIC will only allocate or assign resources from this reserve after approval of the first IPv4 address request that cannot be satisfied using the reserve created under section 11.2.

4. LACNIC may only make IPv4 allocations or assignments greater than or equal to a /28 and smaller than or equal to /24 from this reserve pool.

5. Organizations that receive IPv4 resources under the terms set forth in this policy may receive additional IPv4 resources from LACNIC six months later, provided they generate a new request that justifies the need for additional IPv4

resources according to the IPv4 address allocation or assignment policies in force.

6. In the case of subsequent distributions, the resources allocated to an organization under this policy may be renumbered to minimize the occurrence of non-contiguous distributions.

7. Blocks received under this policy may not be transferred as specified in paragraph 2.3.2.18 of the Policy Manual.

ADDITIONAL INFORMATION

Implementation timeline: Immediate implementation once the proposal is approved

Working group:

Previous related proposals:

References: Source of the statistics presented in the proposal:

<http://www.lacnic.net/pt/web/lacnic/estadisticas-asignacion>

<http://opendata.labs.lacnic.net/ipv6stats/graphs/ipv6evo.html>

<http://6lab.cisco.com/stats/>

Changelog: