OPEN PANEL: IPv6 SPACE ADMINISTRATION

Introduction

The purpose of this panel is to Exchange opinions regarding how to administrate the IPv6 address space in Latin America and the Caribbean. Specifically, the aim is to review the block sizes established in the IPv6 space allocation policy, which specifies a /32 for Internet Service Providers and a /48 for their clients.

Summary of Comments Received on the Mailing List:

1. The sizes of the allocated blocks − a /32 for ISPs and a /48 for its clients − should be reduced to a smaller block. The reason for this change is preservation: the fact that IPv6 address space is very large does not mean that it is unlimited. Past experiences, such as the one with IPv4, the initial allocation policies for which were too "generous," should be avoided.
2. There are proposals in other RIRs to modify the /48 but not the /32.
3. The restriction of a /32 would hinder development and innovation, which is one of the main advantages of IPv6. It would become a situation of NAT application with IPv6.
4. The prefix change does not affect IPv6 routing.
5. The fact that the number of these allocations is not too large allows us the opportunity to discuss this issue now, in order to correctly establish whether the minimum IPv6 allocation policy is correct or should be modified.
6. There are (at least) three fronts on which we can act and/or evaluate:
    - The block allocated to LIRs (/32)
    - The size allocated to sites (/48)
    - The criteria used to measure utilization (HD ratio)
7. In relation to the minimum allocation space, a /32 it is the least critical considering the anticipated number of LIRs/ISPs and the available space. The /48 space is of greater concern because some operators use a /48 for each mobile telephone. The question of the HD ratio, which appears to result in disproportionate allocations. These two issues − /48 and HD ratio − are being strongly discussed at the IETF and documents on the subject are being prepared which appear to be interesting to say the least.
8. Current prefixes are a way to convince ISPs for their prompt implementation. Consider the fact that the trend is to migrate telephony to IP telephony and a wider use of Voice over IP in order to bring down infrastructure costs.
9. The question of the HD-ratio is also quite relevant. To maintain the 0.8 value appears to be inadequate. Documents establish that in a /20 IPv6 block, maintaining the HD-ratio of 0.8, the level of effective utilization when reaching 0.8 is 1% of the total allocated addresses.
10. Presentation by Geoff Huston voicing the concern regarding /48 allocations to end-users and also concerning the HD Ratio. http://www.ripe.net/ripe/meetings/ripe-50/presentations/ripe50-plenary-wed-ipv6-roundtable-report.pdf
11. Based on another study by Geoff Huston, available at http://www.potaroo.net/ispcol/2005-07/ipv6size.html, the following recommendations can be summarized:
    - to modify the HD ratio to 0.94
    - to modify the recommendations for delegation, so that not everyone obtains a /48 (if they need subnets), introducing the recommendation of allocating a /56 for SOHOs and a /64 for PANs.