

Draft Policy ARIN-2024-8: Restrict the Largest Initial IPv6 Allocation to /20

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Problem Statement

Current Text (25 June 2024)

In order to promote aggregation, the NRPM currently allows initial allocations up to a /16. However, the entire IPv6 address space only contains 65536 /16s, and the space allocated to IANA for globally routable purposes only contains 8192 /16s. Therefore, a /16 is a sufficiently large portion of the IPv6 address space that the goal of conservation starts to outweigh the goal of aggregation.

Policy Statement

6.5.2.1b: Replace

“In no case shall an ISP receive more than a /16 initial allocation.” with “In no case shall a LIR receive more than a /20 initial allocation.”

Timetable for Implementation: Immediate.

Proposed Changes

Current Text:

In no case shall **an ISP** receive more than a **/16** initial allocation.

Proposed Text:

In no case shall **a LIR** receive more than a **/20** initial allocation.

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| Action | Date |
|--------------|--------------|
| Proposal | 31 May 2024 |
| Draft Policy | 26 June 2024 |
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| | |

Community Feedback

- "The current policy has been in effect since ARIN-2011-3 was implemented in January 2012. One /16 allocated in over a decade doesn't represent a problem. Instead, it indicates a successful policy that balances the need for justification with the ability to provide substantial allocations."
- "We can discuss of theoretical scenarios on how to justify it [a /16 allocation], but there is no going around the fact that that's extremely wasteful and unnecessary."
- "I'm in the wait and see camp."

Community Feedback

- "When it comes to smallish blocks, the desire to enable aggregation and smaller routing tables outweighs concerns about address conservation. However, I believe that once we're talking about blocks larger than a /20, conservation concerns outweigh routing table concerns."
- "Nibble boundaries offer two valuable characteristics in IPv6:
 - First, it simplifies reverse DNS delegation since ip6.arpa is implemented on nibble boundaries.
 - Second, it makes it easier to understand written IPv6 addresses and subnets, since the subnet boundary always occurs between written digits instead of causing those digits to change."

Policy Impact

This draft policy would reduce the maximum initial IPv6 allocation size from a /16 to /20.

The term ISP will be replaced with LIR.

A Local Internet Registry (LIR) is an IR that primarily assigns address space to the users of the network services that it provides. LIRs are generally Internet Service Providers (ISPs) whose customers are primarily end users and possibly other ISPs. LIR is common nomenclature for all Regional Internet Registries and is used throughout section 6.



Questions for the Community

Do you support the draft policy as written?

If not, can the policy be changed so you would support it? What change(s) do you support?

Should the community continue to work on the policy or abandon it?