## IPv6 prefix assignment for endcustomers - persistent vs nonpersistent, and what size to choose.

(Best Current Operational Practice for operators)

# What is this document all about?

- This document discusses the main issues related to the operational practices for the assignment of IPv6 prefixes for end-customers.
- Making wrong choices when designing your IPv6 network will sooner or later have negative implications on your deployment and require further effort such as renumbering when the network is already in operation. The temptation to take "easy" approaches for quicker deployment should therefore be resisted.

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# Draft v.1

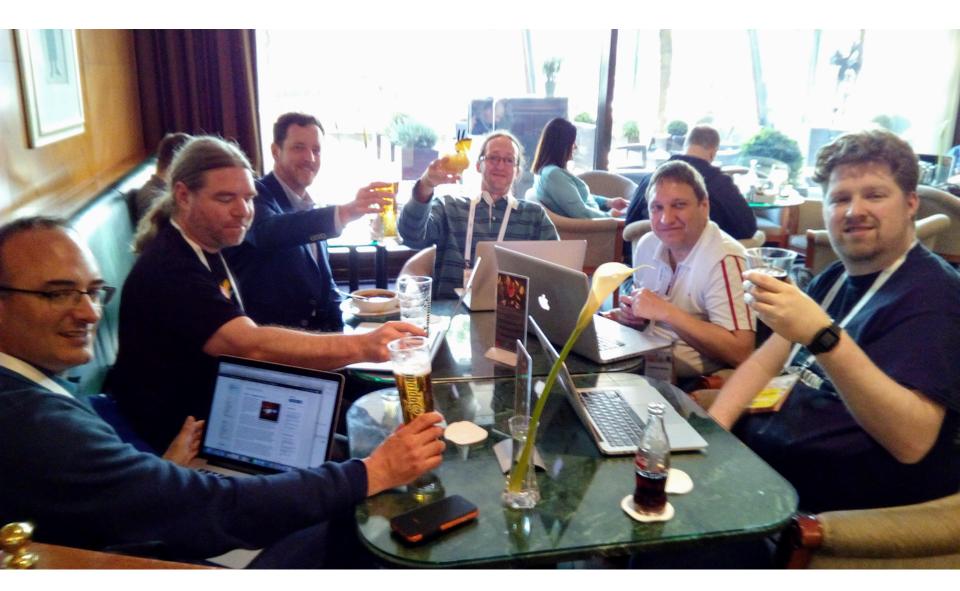
- https://sinog.si/docs/draft-IPv6pd-BCOP-v1.pdf
- [root@webserver]# grep draft-IPv6pd-BCOPv1.pdf sinog-ssl\_access\_log\* | wc -l

# 909

# Draft v.2

- <u>https://sinog.si/docs/draft-IPv6pd-BCOP-v2.pdf</u>
- Number of comments and suggestions on-list and off-list...
- Presented and gathered some comments also at RIPE BCOP TF meeting on Monday
- Majority of co-authors, present at RIPE74 meeting in Budapest gathered in a lobby bar on Tuesday to do the editorial cycle, followed by language pass.
- Sent to RIPE IPv6 mailing list on 11<sup>th</sup> May at 02:44am

## Editing draft v.2



#### Table of content:

1. Executive Summary

#### 2. What is a BCOP?

- 3. Introduction and incentives
- 4. Size of end-customer prefix assignment: /48, /56 or something else?

4.1. Numbering the WAN link (interconnection between our network and the end-customer CPE):

4.1.1. /64 prefix out of a dedicated pool of IPv6 prefixes

- 4.1.2. Unnumbered
- <u>4.1.3. ULA</u>

4.1.4. /64 prefix out of the IPv6 prefix assigned to the end-customer

4.1.5. Summary

4.2. Prefix assignment options

4.2.1. /48 for everybody

4.2.2. /48 for business customers and /56 for residential customers

4.2.3. Less than /56

4.2.4. Considerations for cellular operators

- 5. End-customer IPv6 prefix assignment: Persistent vs non-persistent
  - 5.1. Why non-persistent assignments may be perceived as "easier" than static ones.

5.2. Why non-persistent assignments are considered harmful.

5.3. Why persistent prefix assignments are recommended.

6. Acknowledgements

### Acknowledgements

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#### Q&A

Suggestions? Comments? Ideas?

Way forward?