

IPv6 Point-to-Point Links

draft-palet-v6ops-p2p-links-01

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History and Goal

- Work started in 2006
 - Focus: P2P links from customer prefix
- Now, many networks use it (69%)
- A DHCPv6-PD option (2012) supports this
 - “Prefix Exclude Option for DHCPv6-based Prefix Delegation” (RFC6603)
- In IETF 101 WG considered that should be broadened to all possible p2p link choices

Summary (1)

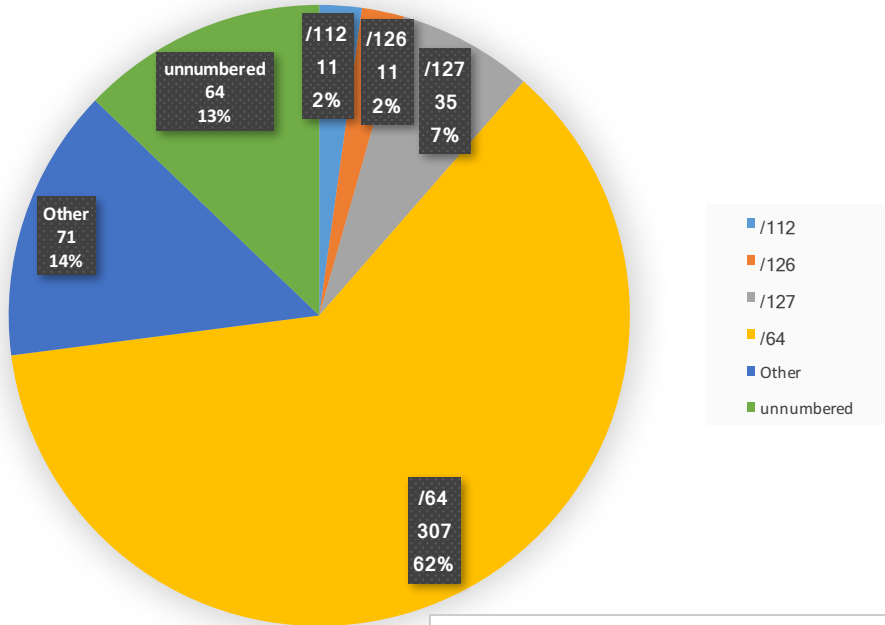
- Intro
 - RFC6164 describes /127, using a dedicated pool for p2p links
 - Doesn't preclude other options:
 - “routers must support it recommendation”
 - In fact a big % of market uses /64 (62%)
- Prefix Size Choices
 - RFC7608 “IPv6 prefix length is a parameter”
 - /64
 - /127
 - /126 and other choices
 - Allocate /64 and use /127

Summary (2)

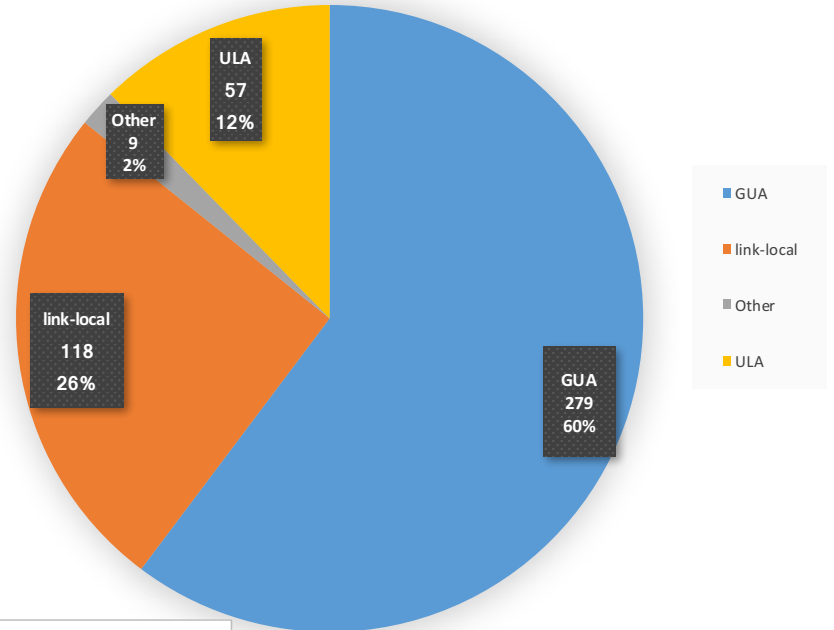
- Numbering Choices
 - GUA
 - ULA
 - Unnumbered (link-local)
- Prefix Pool Choices
 - “IPv4 style” -> dedicated pool for p2p links
 - /64 from Customer prefix
 - Numbering interfaces
 - Routing aggregation
 - DHCPv6 Considerations
 - Router Considerations

IPv6 Deployment Survey

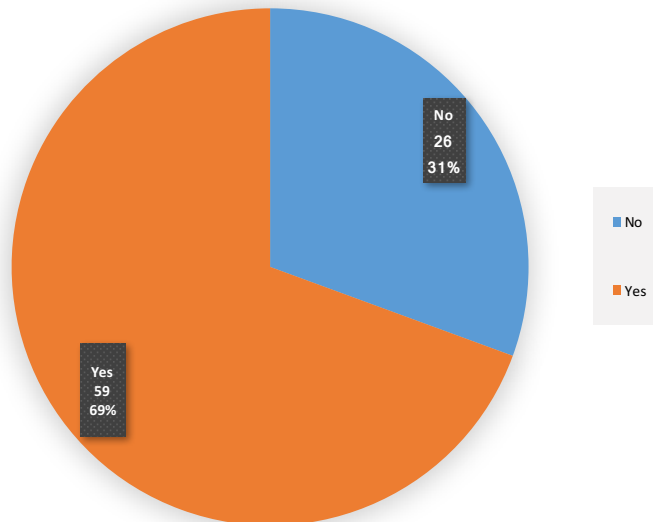
WAN Prefix Size



WAN Addressing Type



WAN /64 from customer prefix



Changes from v00

- Reference to RFC7608
- Using GUA source address for ULA and LL p2p-links as per RFC4443 section 2.2
- Split Normative and Informative references

Next steps

- Questions ?
- Become a WG item ?
- Inputs ?