

Guidelines for Numbering IPv6 Point-to-Point Links and Easing the Addressing Plans

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Why this document?

- When deploying IPv6, operators ask for guidelines and this is a very frequent question
- Is not the only possible way, but has been put in practice, works and liked to several operators
 - Goal for informational

Rational for using /64

- IPv6 Addressing Architecture (RFC4291)
- Use of /127 ... harmful (RFC3627)

Numbering interfaces

- Good practice according some operators view, not all agree
- Two choices:
 - Easy to remember (i.e. ::1 and ::2)
 - Easy to track for a possible attacker
 - Follow EUI-64
 - Additional degree of difficulty for an attacker (IPv6 implications for TCP/UDP port scanning)

Routing aggregation

- Number the point-to-point link with the 1st /64 of a /48
 - May be a problem for some DHCPv6-PD implementations
- Example:
 - Customer prefix 2001:db8:aaaa::/48
 - Point to point link 2001:db8:aaaa::1/64
 2001:db8:aaaa::2/64
- Also could be:
 - P2p link at provider side 2001:db8:aaaa::1/48
 - P2p link at customer side 2001:db8:aaaa::2/64

Next Steps

- WG Item as info document