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

draft-palet-v6ops-point2point-00.txt

Jordi Palet
jordi.palet@consulintel.es
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