

# Using 127-bit IPv6 Prefixes on Inter-Router Links

draft-kohno-ipv6-prefixlen-p2p-01.txt

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# The major changes from -00

- Had Lorenzo Colitti join to the author team
- Stated the reasons for using longer prefixes more clearly
  - Ping-pong issue
  - Neighbor cache exhaustion issue
  - Other reasons

# global address for Inter-Router Links

- operational needs
  - for health check (by ping) and to help traceroute
  - for eBGP configuration
- concern for /64
  - ping-pong issues on sonet/tunnel links
  - Neighbor cache exhaustion issues
  - and others as well
- workarounds other than /127
  - /128 addressing
  - packet filter
  - these are difficult to deploy on AS-boundaries

# Operators need insurance

- /127 is like an insurance for us
  - to avoid unexpected misuse/attacks
- We have /31 addressing for IPv4, so we are already familiar with the smallest minimum addressing.

# /127 on Inter-Router Links

- /127 addressing works today, and we are using it in our network.
  - Subnet-Router Anycast is not currently widely implemented.
- Then we would like to make sure that it keeps working in the future as well.

# The recommendation

- The draft proposes that Inter-Router links MAY be assigned 127-bit prefix lengths.
- If such a prefix is assigned to a link, Subnet-Router Anycast MUST be disabled for the prefix.
  - Obsoletes: 3627 (if approved)
    - RFC3627 : Use of /127 Prefix Length Between Routers Considered Harmful
  - Updates: 4291,5375 (if approved)
    - RFC4291 : IP Version 6 Addressing Architecture
    - RFC5375 : IPv6 Unicast Address Assignment Considerations

# Next step

- Ask 6man WG to adopt the draft as the WG document