Improving the Reaction of Customer Edge Routers to Renumbering Events
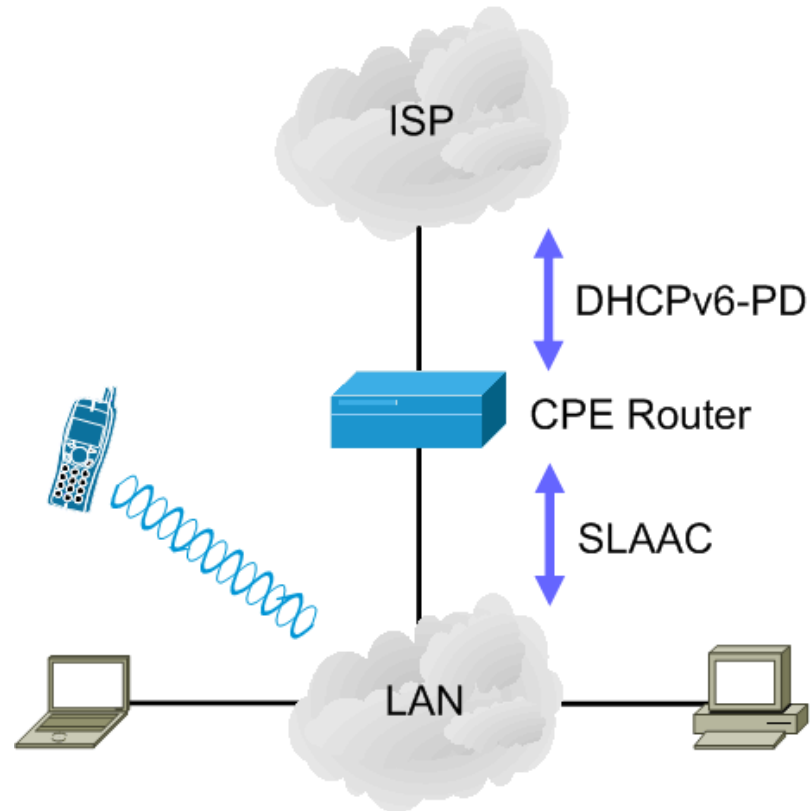
draft-gont-v6ops-cpe-slaac-renum

Fernando Gont
Jan Zorz
Richard Patterson

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Common scenario

- Residential IPv6 deployment:

CPE routers

- Problem scenario

  - CPE router is hard-rebooted

  - CPE router crashes and reboots

- What happens when the CPE router comes back to life?

  - **Quite frequently it has no state of previously-leased prefix**

  - It thus requests a new prefix via DHCPv6-PD

  - The new prefix is announced on the LAN

- What about the previous prefix?

  - It is still there!

  - Announced lifetimes allow continued use for days to months

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- **Provides recommendations for CPE routers**

  - such that they behave nicely when they can

- CPE routers MUST phase out stale configuration information

  - Record leased prefixes on stable storage

  - If a new prefix is delegated, announce both new and old (to phase out stale one) [RFC7084]

- CPE routers MUST implement proper DHCPv6-PD/SLAAC interface

  - SLAAC lifetimes must not span past the DHCPv6-PD lifetime [RFC8415]

- CPE routers SHOULD NOT send DHCPv6-PD RELEASE messages upon reboot events

- (probably more to add...)

Moving forward

- Adopt document as v6ops wg item?