

Triggering Unsolicited Router Advertisements Upon Configuration Changes

draft-link-6man-truce-00

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Problem Statement

When an interface becomes an advertising interface: RAs are sent within the first 16 (`MAX_INITIAL_RTR_ADVERT_INTERVAL`) second.

When the RA-related configuration changes (PIOs, router lifetime, DNS etc):

The information contained in Router Advertisements may change through actions of system management. For instance, the lifetime of advertised prefixes may change, new prefixes could be added, a router could cease to be a router (i.e., switch from being a router to being a host), etc. In such cases, the router **MAY** transmit up to `MAX_INITIAL_RTR_ADVERTISEMENTS` unsolicited advertisements, using the same rules as when an interface becomes an advertising interface.

Proposed Change #1 (changed since -00!)

The information contained in Router Advertisements may change through actions of system management. For instance, the lifetime of advertised prefixes may change, new prefixes could be added, a router could cease to be a router (i.e., switch from being a router to being a host), etc. **In such cases, the router MUST send an immediate unsolicited advertisement.** The router MAY also transmit up to MAX_INITIAL_RTR_ADVERTISEMENTS unsolicited advertisements, using the same rules as when an interface becomes an advertising interface.

Previous Work in the Area (part 1)

Requirement L-13 (RFC7084, RFC9096): the IPv6 CE router **MUST** immediately advertise stale information...

- Applies to CE (CPE) routers only.
- Only for PIO information

draft-ietf-6man-slaac-renum suggested text similar to -00 of this draft

- Expired
- Contains a lot of other changes
- Conflicts with the recommendations from the next slides ;)

Change #2 (not in -00) Multiple Router Advertisements

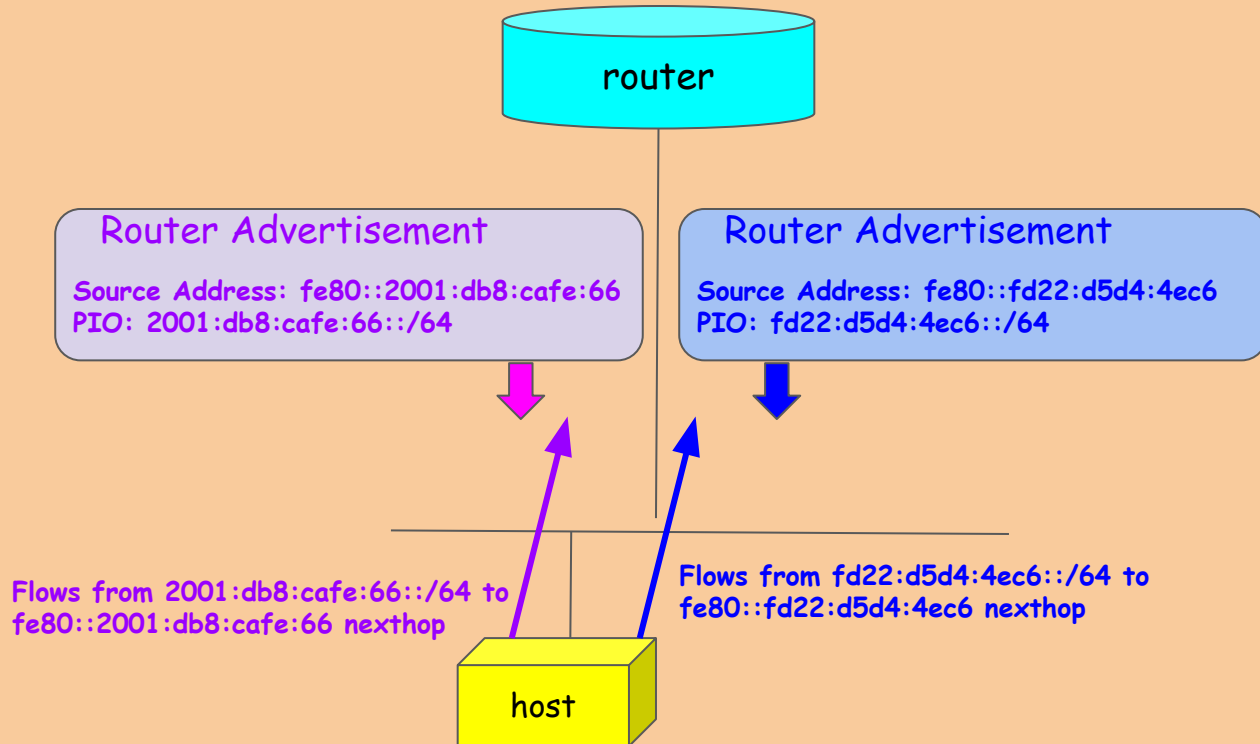
[draft-link-v6ops-gulla](#) proposes that routers are configured with prefix-specific link-local addresses:

- Manually configured using any algorithm
 - Example: fe80::2001:db:dead:beef for 2001:db:dead:beef::/64
 - Stable interface ID (RFC7217)

When a router interface has multiple PIOs configured, changes in some of them would impact flows using other prefixes

Solution: an RA (and unique link-local address) per prefix.

Per-PIO Router Advertisements



Previous Work in the Area

Enterprise Multihoming, RFC8678

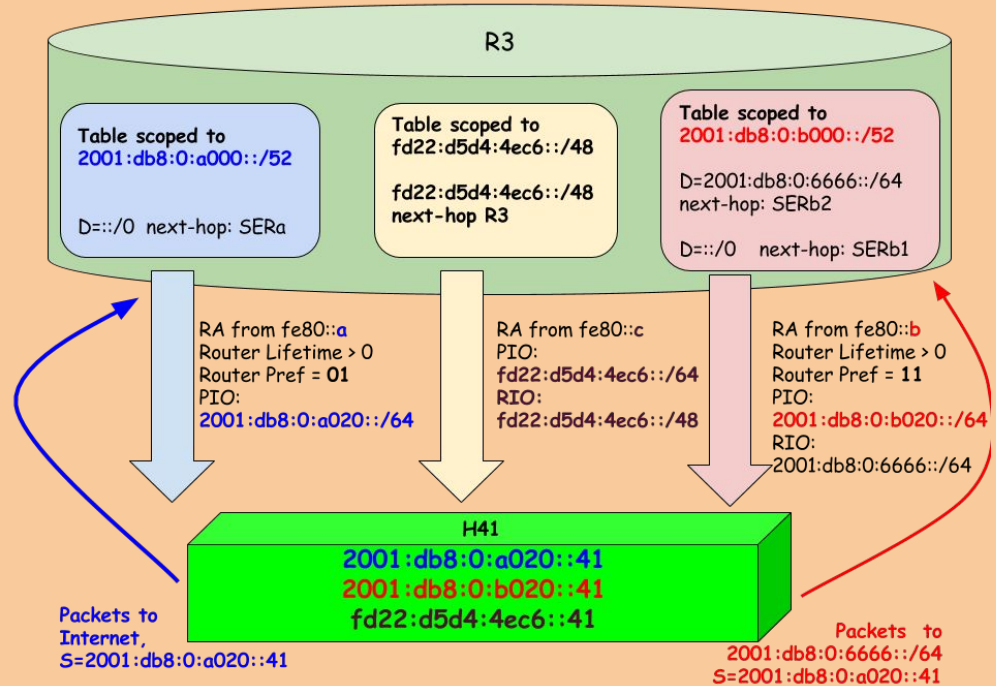
Presented at IETF96, 2016

...now replace "table" with "pvd"...

RFC8028

3.2. Default Router Selection

Default Router Selection ([Section 6.3.6 of \[RFC4861\]](#)) is extended as follows: A host SHOULD select default routers for each prefix it is assigned an address in. Routers that have advertised the prefix in their Router Advertisement message SHOULD be preferred over routers that do not advertise the prefix, regardless of Default Router Preference. Note that this document does not change the way in which default router preferences are communicated [[RFC4191](#)].



Next Steps

Adopt as it is?

Merge with expired draft-ietf-6man-slaac-renum?

But recommendations for multiple RAs are opposite to that draft.