Recommendation on Non-Stable IPv6 Interface Identifiers
(draft-gont-6man-non-stable-iids)

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Motivation

- SLAAC has traditionally resulted in stable addresses

- Stable (only) or mixed stable/temporary addresses are desirable in many scenarios

- However, temporary (only) may be desirable in other scenarios

- But current specs (RFC4941) imply temporary addresses are generated along stable addresses

Goals of this document

- Clarify that nodes are not required to generate stable addresses

  - stable only, temporary only, or mixed stable/temporary become all possible

- Formally update RFC4941 such that use of temporary-only is possible

- Specify security/privacy requirements for non-stable IIDs

- Suggest possible ways to generate non-stable IIDs

Update to RFC4941

"The temporary addresses specified in [RFC4941] MAY be used in replacement of the stable addresses [I-D.ietf-6man-default-iids]. That is, a node MAY configure temporary addresses only, without configuring any stable addresses."

Requirements for non-stable IIDs

- Must be different for different prefixes

- Must be semantically opaque

- Must not embed layer-2 addresses

- Must be difficult to predict by an outside entity

Generation of non-stable IIDs

- Use any algorithm that complies with the specified requirements, e.g.:

    – RFC4941

    – Random IIDs that change upon network disconnection/attachment

Moving forward

- Adopt as 6man WG item?