

YANG Data Model for IPv6 Neighbor Discovery

[draft-ietf-6man-ipv6-neighbor-discovery-yang-03](#)

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Recap - What does this model cover

■ Existing YANG definitions

- *ietf-ip.yang* [RFC8344] covers **basic ARP** and **IPv6 ND** functionalities
- *ietf-ipv6-router-advertisements.yang* [RFC8349] covers **Router Advertisement**
- *draft-ietf-intarea-arp-yang-model* extends **ARP** YANG functionalities

■ This draft covers the **additional configuration and management of IPv6 ND and related functions** that are not covered by the above YANG model, including

- IPv6 Address Resolution & Redirect
- Proxy Neighbor Advertisement
- Neighbor Unreachability Detection (NUD)
- Duplicate Address Detection (DAD) / Enhanced DAD
- ND Statistics

Changes since IETF 124

- Removed some nodes to align with RFC 4861
 - Leaf enabling dynamic address resolution
 - Leaf enabling NUD
 - Specific proxy types & simplified proxy-na to a single enable/disable leaf
- Aligned parameter defaults, ranges, and units
 - reachable-time aligned with REACHABLE_TIME
 - ns-interval aligned with RETRANS_TIMER
- Changed statistics types from yang:counter32 to yang:counter64 to align with ietf-interfaces
- Clarified that per-interface stale-timeout overrides the global value
- Added constraints
 - auto-resolve (when enable = true)
 - age (when ../ip:origin = 'dynamic')
- Added and updated references

```
module: ietf-ipv6-nd
  +--rw nd
    +--rw stale-timeout?   uint32

augment /if:interfaces/if:interface/ip:ipv6:
  +--rw nd
    +--rw reachable-time?   uint32
    +--rw ns-interval?      uint32
    +--rw stale-timeout?    uint32
    +--rw redirect?         boolean
    +--rw proxy-na?         boolean
    +--rw enhanced-dad
      | +--rw enable?        boolean
      | +--rw auto-resolve?  boolean
    +--ro statistics
      +--ro in-ns-pkts?      yang:counter64
      +--ro in-na-pkts?      yang:counter64
      +--ro in-rs-pkts?      yang:counter64
      +--ro in-ra-pkts?      yang:counter64
      +--ro in-redirect-pkts? yang:counter64
      +--ro out-ns-pkts?     yang:counter64
      +--ro out-na-pkts?     yang:counter64
      +--ro out-rs-pkts?     yang:counter64
      +--ro out-ra-pkts?     yang:counter64
      +--ro out-redirect-pkts? yang:counter64

augment /if:interfaces/if:interface/ip:ipv6/ip:neighbor:
  +--ro age?   uint32
```

Next steps

- WGLC
- Comments are welcome

Thanks!