A YANG Data Model for ARP

draft-ietf-intarea-arp-yang-model-00

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INTAREA@IETF 124, Nov 2025

What Does This Model Cover

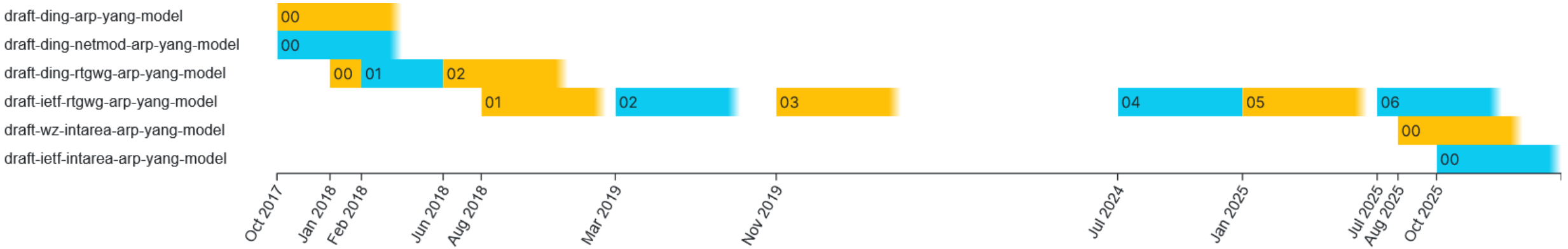
- This draft covers the **extra bits of ARP** implementations that many vendors support, but not covered by existing IETF YANG models, e.g.
  - Proxy ARP, Gratuitous ARP configuration, etc.
  - ARP statistics
- Related YANG definitions
  - ***ietf-ip****.yang [RFC8344]* defines **basic ARP and IPv6 ND** functionalities, e.g. neighbor table
  - ***ietf-ipv6-nd****.yang [draft-ietf-6man-ipv6-neighbor-discovery-yang]* extends **IPv6 ND** YANG functionalities

```
module: ietf-arp
  +--rw arp
     +--rw dynamic-learning?   boolean

  augment /if:interfaces/if:interface/ip:ipv4:
    +--rw arp
       +--rw expiry-time?        uint32
       +--rw dynamic-learning?   boolean
       +--rw proxy-arp
       |  +--rw mode?   enumeration
       +--rw gratuitous-arp
       |  +--rw enable?     boolean
       |  +--rw interval?   uint32
       +--ro statistics
          +--ro in-requests-pkts?      yang:counter32
          +--ro in-replies-pkts?       yang:counter32
          +--ro in-gratuitous-pkts?    yang:counter32
          +--ro out-requests-pkts?     yang:counter32
          +--ro out-replies-pkts?      yang:counter32
          +--ro out-gratuitous-pkts?   yang:counter32
  augment /if:interfaces/if:interface/ip:ipv4/ip:neighbor:
    +--ro remaining-expiry-time?   uint32
```

History of the Draft

- Originally an RTGWG WG document (draft-ietf-rtgwg-arp-yang-model)
- Resumed following the new submission of the IPv6 ND YANG model draft
- Moved to IntArea based on the discussion at IETF 123



Next Steps

- WG LC
- Comments are welcome

Thanks!

YANG Excerpts

RFC8344: A YANG Data Model for **IP Management**

```
module: ietf-ip
  augment /if:interfaces/if:interface:
    +--rw ipv4!
    |  +--rw enabled?      boolean
    |  +--rw forwarding?   boolean
    |  ...
    |  +--rw neighbor* [ip]
    |     +--rw ip                    inet:ipv4-address-no-zone
    |     +--rw link-layer-address    yang:phys-address
    |     +--ro origin?               neighbor-origin
    +--rw ipv6!
       +--rw enabled?                    boolean
       +--rw forwarding?                 boolean
       |  ...
       +--rw neighbor* [ip]
       |  +--rw ip                    inet:ipv6-address-no-zone
       |  +--rw link-layer-address    yang:phys-address
       |  +--ro origin?               neighbor-origin
       |  +--ro is-router?            empty
       |  +--ro state?                enumeration
       +--rw dup-addr-detect-transmits?   uint32
       +--rw autoconf
          ...
```