

YANG Data Model for ARP

RTGWG IETF 102

draft-ding-rtgwg-arp-yang-model-02

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Our plea

- RTGWG adoption of this ARP YANG Model draft
- After that, we would like it to flow fairly expediently through the WG process ...
- But for the moment, we would settle for WG adoption ... ㄴ

Why is it needed?

- Existing ietf-ip.yang [RFC 8344] **covers basic dynamic and static ARP** entries on an interface
- This draft covers the **extra bits of ARP** implementations that many vendors support, but ietf-ip doesn't cover, e.g.
 - ARP statistics
 - Global ARP entries
 - Proxy ARP, etc.

Excitement Factor

- Relatively low, new protocols are much more exciting, but ...
- Having a standardized model makes life much easier for operators
- It does not need to be perfect, just good enough, and it can evolve over time
- Follows reasonable design principles
- Draft is on third revision - ready for adoption

Can you help?

- By showing support that this work is relevant to IETF and useful?
- By agreeing to review and comment on the YANG model and draft

BACKUP SLIDES

What has changed since London

- Addressed some comments from Reshad Rahman
- Aligned with OpenConfig YANG module
- Reconstruct ARP YANG module (merge two modules into one)
- Removed global statistics information
- Removed 'if-limit' feature

Current structure (global):

```
module: ietf-arp
  +--rw arp
    +--rw global-static-entries {global-static-entries}?
      | +--rw static-entry* [ip-address]
      |   +--rw ip-address      inet:ipv4-address-no-zone
      |   +--rw mac-address     yang:mac-address
    +--rw global-control
      +--rw enable-learning?    boolean
      +--rw enable-proxy?      boolean

augment /if:interfaces/if:interface:
  ...
```


Current structure (interface augmentations):

```
module: ietf-arp
...
augment /if:interfaces/if:interface:
  +--rw arp-dynamic-learning
    +--rw expire-time?      yang:timeticks
    +--rw learn-disable?   boolean
    +--rw proxy
      | +--rw mode?        enumeration
    +--rw probe
      | +--rw interval?   uint8
      | +--rw times?      uint8
      | +--rw unicast?    boolean
    +--rw gratuitous
      | +--rw enable?     boolean
      | +--rw interval?   uint32
      | +--rw drop?       boolean
    +--ro statistics
      +--ro in-requests-pkts?    uint16
      +--ro in-replies-pkts?     uint16
      +--ro in-gratuitous-pkts?  uint16
      +--ro out-requests-pkts?   uint16
      +--ro out-replies-pkts?   uint16
      +--ro out-gratuitous-pkts? uint16
  augment /if:interfaces/if:interface/ip:ipv4/ip:neighbor:
    +--ro remaining-expire-time?  uint32
```