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 ...
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