

YANG Data Model for ARP

NETMOD IETF 100

draft-ding-netmod-arp-yang-model-00

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Problems and Possible Solutions

- Problem

- Different vendor has its own private YANG module to implement ARP function
- Service provider needs many ARP YANG modules to manipulate massive devices

- Solution: extract some common properties that need to be configured

- unique identifier for a ARP configuration function. E.g. aging (timeout, expire-time), interval (detect-interval, arp-interval)
- common properties. E.g. Static ARP Entry, dynamic ARP entries, proxy ARP

ARP configuration

- arp-static-tables
- expire-time
- arp-learn
- arp-proxy
- arp-prob-grouping
- arp-gratuitous-grouping
- arp-if-limits

```
module: ietf-arp
+--rw arp
|   +--rw arp-static-tables
|   |   +--rw arp-static-table* [vrf-name ip-address]
|   |   |   +--rw vrf-name          arp:routing-instance-ref
|   |   |   +--rw ip-address       inet:ipv4-address-no-zone
|   |   |   +--rw mac-address      yang:mac-address
|   |   |   +--rw if-name?        leafref
|   +--rw arp-interfaces
|   |   +--rw arp-interface* [if-name]
|   |   |   +--rw if-name          leafref
|   |   |   +--rw expire-time?     uint32
|   |   |   +--rw arp-learn-disable? boolean
|   |   |   +--rw proxy-enable?   boolean
|   |   |   +--rw probe-interval? uint8
|   |   |   +--rw probe-times?    uint8
|   |   |   +--rw probe-unicast?  boolean
|   |   |   +--rw arp-gratuitous?  boolean
|   |   |   +--rw arp-gratuitous-interval? uint32
|   |   |   +--rw arp-gratuitous-drop? boolean
|   |   +--rw arp-if-limits
|   |   |   +--rw arp-if-limit* [vlan-id]
|   |   |   |   +--rw vlan-id      uint16
|   |   |   |   +--rw limit-number uint32
|   |   |   |   +--rw threshold-value? uint32
```

Next Steps

- Align with other models
- Solicit comments
- WG consensus