INT Packet Marker

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Existing Options for IPv4 traffic

- Not work for us
  - DSCP (0-63)
    - Already assigned to BUs
  - UDP/TCP ports
    - Already used in ECMP/flow control

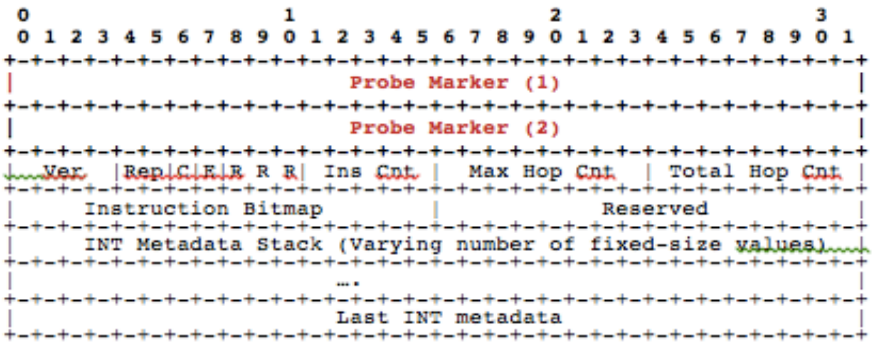
  - Other potential protocol options
    - IP option
    - Evil bit
    - TCP reserved flags. But not for UDP
    - …..
    - Time to market ?

Our Goal

- No impact on DSCP, UDP/TCP ports
- Immediate deployment
- Better if compatible with other ASIC

Metadata Header with Probe Marker

- 64-bit Probe Marker



  - Default Value, could be configurable
- https://tools.ietf.org/html/draft-lapukhov-dataplane-probe-01

Metadata Header with Probe Marker

- Not a perfect solution
  - https://tools.ietf.org/html/draft-lapukhov-dataplane-probe-01 expired
- But
  - Implemented by ASIC on market
  - Initial testing result

New APIs

- On Source Node
  - if (match IP src/dest, prot type, src/dest port) may need multiple
    - set probe marker
- On Transit Node
  - If (match probe marker)
    - add metadata
- On Sink Node
  - If (match probe marker)
    - add metadata
    - trim/analyze

Users’ view

- INT packets indicator and metadata header format across vendors
- Bandwidth usage in flow monitoring
- Event trigger monitoring on sync node