draft-dhody-teas-te-traffic-yang-03

TRAFFIC MAPPING YANG MODEL FOR TRAFFIC ENGINEERING (TE)

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BACKGROUND
TRAFFIC MAPPING

- IETF has various YANG models to set up paths & services
  - but lacks a standard YANG model for identifying which traffic flows are directed on these paths & services…
- Elements can be borrowed from
  - ACL
  - Match Criteria of IETF network slice YANG
  - Flowspec (BGP/PCEP)
  - Flow match based on IP/UDP/TCP header
  - Etc

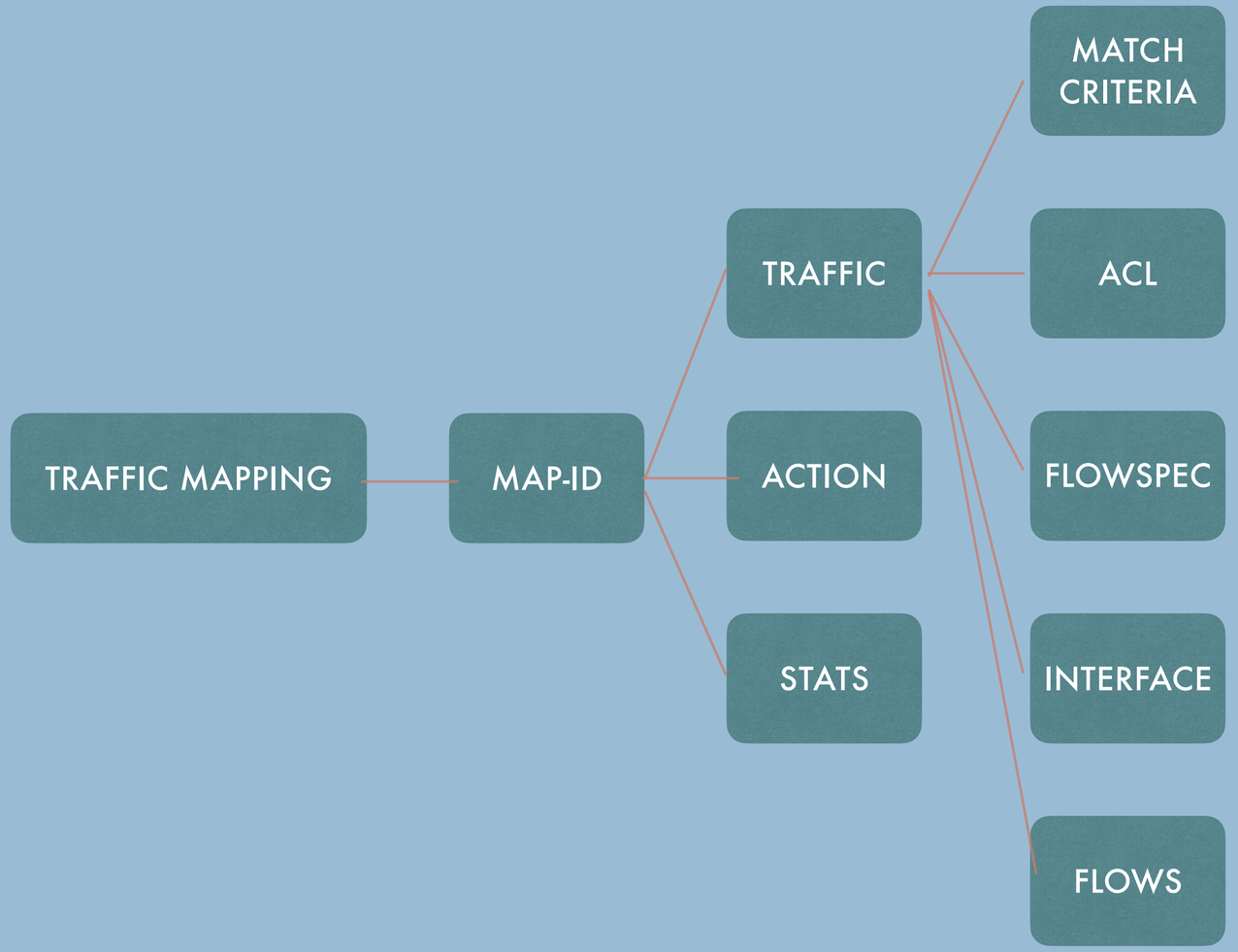
BACKGROUND

TRAFFIC MAPPING

- This can be applied to
  - Which traffic flows in which services and paths
    - A missing element in some YANG models
    - A common generic way that can be used uniformly
  - Traffic classification for SFC (and APN)

YANG STRUCTURE

TRAFFIC MAPPING



YANG TREE

TRAFFIC MAPPING

- Mapping of traffic flows via
  - Generic match criteria
  - ACL
  - Interface
  - Match on IP/TCP/UDP headers
  - Flowspec
- Optionally, also include actions and stats…

```
module: ietf-traffic-map
     +--rw traffic-map
        +--rw maps* [id]
           +--rw id          string
           +--rw traffic
           |  +--rw id?                       string
           |  +--rw (type)?
           |     +--:(match-criteria)
           |     |  +--rw match-criterion* [index]
           |     |     +--rw index          uint32
           |     |     +--rw match-type     identityref
           |     |     +--rw value*         string
           |     +--:(acl)
           |     |  +--rw acl?                -> /acl:acls/acl/name
           |     +--:(flowspec)
           |     +--:(interface)
           |     |  +--rw node?               string
           |     |  +--rw if-name?            string
           |     +--:(flow)
           |     |  +--rw (l3)?
           |     |  |  +--:(ipv4)
           |     |  |  |  +--rw ipv4
           |     |  |  |        ...
           |     |  |  +--:(ipv6)
           |     |  |     +--rw ipv6
           |     |  |           ...
           |     |  +--rw (l4)?
           |     |     +--:(tcp)
           |     |     |  +--rw tcp
           |     |     |        ...
           |     |     +--:(udp)
           |     |        +--rw udp
           |     |              ...
           |     +--:(other)
           +--rw action
           |  +--rw te-tunnel*   te:tunnel-ref
           |  +--rw sr-policy* [headend policy-color-ref policy-endpoint-ref]
           |  |  +--rw headend                inet:ip-address-no-zone
           |  |  +--rw policy-color-ref       leafref
           |  |  +--rw policy-endpoint-ref    leafref
           |  +--rw other
           +--ro stats
              +--ro matched-packets?   yang:counter64
              +--ro matched-octets?    yang:counter64
```

SOME QUESTIONS

TRAFFIC MAPPING

- Is a standard traffic mapping YANG model useful?
  - Or are we too late…
  - Or is it better for each use case to figure this out on its own?
- Is this the correct approach?
- Does this work belong in TEAS?
  - Or somewhere else?


THANKS!