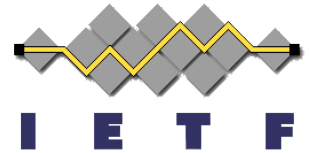


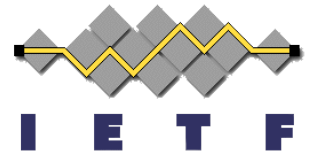
Routing a class of traffic

draft-baker-fun-routing-class

Fred Baker



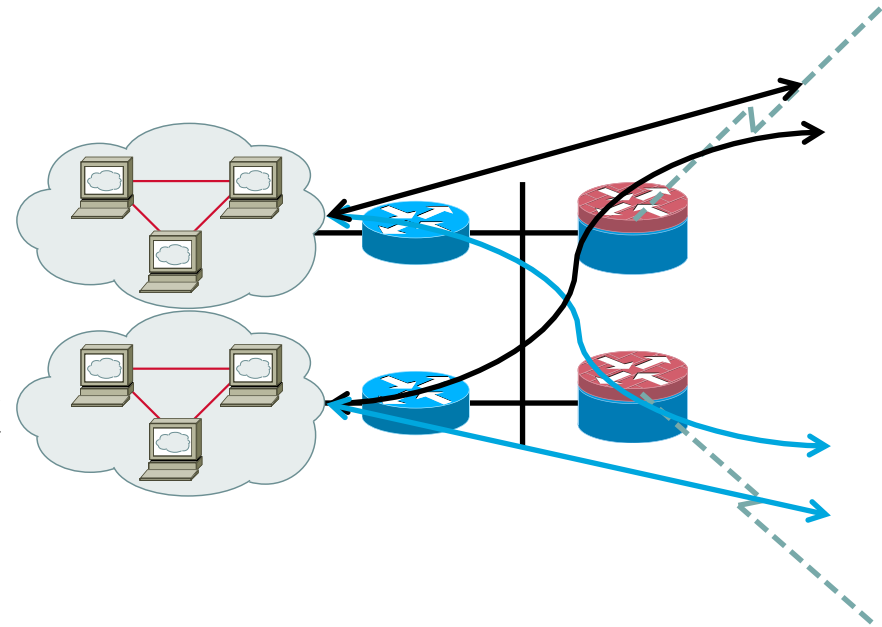
Change of paradigm

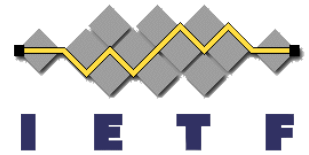


- Typical Internet routing (RIP, OSPF, IS-IS, BGP) routes **to a destination**
 - Variation: OSPF supports routing to a destination using a DSCP
 - Proprietary extensions: traffic matching an ACL is routed to a neighboring router
- Generalization:
 - Traffic conforming to a certain description is routed somewhere (“route a class of traffic”)
 - Traffic class definition:
 - {destination, source|*, DSCP|*, ...}

Examples

- Destination route
 - $\{D=\text{prefix}, S=::, *, \dots\}$
- Route from IPTV-allocated prefix to IPTV ISP
 - $\{D=\text{IPTV ISP}, S=\text{TV-prefix}, *, \dots\}$
- Route from ISP-allocated prefix to ISP
 - $\{D=2001::/3, S=\text{ISP-prefix}, *, \dots\}$

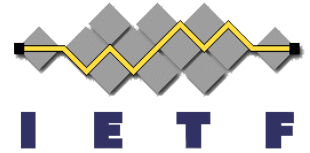




Conceptual model

- Replace “longest match” rule with “most specific”
 - Consider a route to be an aggregation of some number of host-to-host routes
 - Select the matching traffic class that does so most specifically
- Aggregation of routes:
 - A traffic class that matches several more specific traffic classes is an aggregation of those traffic classes

Implementation with DV or SPF algorithms



- Discussed in draft in hand-wavy fashion
 - I won't bore you here unless you really want me to...