

# A plethora of flowspec features and an afternoon chat at IETF 94

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# The current landscape

- Flowspec has become a very popular feature and is getting a significant number of additional mechanisms proposed for it. These mechanisms fall into two broad categories:
  - Additional traffic redirection behaviors.
  - Additional match criteria.
- Several, but not all, of the authors of various flowspec features met on Sunday of IETF-94 to discuss reconciling some of the potential feature interactions. This is my summary of that discussion.

# Redirection (1)

- The original feature for redirection was “redirect to VRF”.
- A “redirect to IP” feature is an adopted I-D in IETF.
  - A significant portion of the complexity in the draft was reconciling behavior when both redirect to VRF is specified along with redirect to IP.
  - Additionally, the behavior when multiple redirect-to-IP extended communities was addressed.

# Redirection (2)

- The new redirection functionalities fall into three broad classes with relation to redirect-to-VRF/IP:
  - Complementary: Tunnel
  - Partially complementary: MPLS Label
  - Disjoint: Path-id (?), SID

# Match Criteria

- NVO3 – Applicable in the edge scenario, but not likely in transit.
- Time – Clearly specified. My specific concern is “surprises”, partially due to scenarios relating to how flowspec orders rules along with multiple distributors.
- Interface-set. Calls out potential need for add-paths support.

# Informational

- The proposal adds a descriptive piece of text to the flowspec rule. Discussion has suggested if we want such a feature, it is probably a general purpose feature.

# Future steps

- For features that may impact forwarding:
  - Determine if they are intended to work with each other and what the behaviors are if they do. Our challenge is where we document the full set of combinations
  - When the features are not complementary, how do we tie-break on routers that implement both features?
    - Ignore all?
    - Preference? Where is this preference? In spec, or via configuration? What about tie-breaking?