

# Route Change Statistics Based on Policy draft-smc-grow-bmp-route-change- stats

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# Problem Statement

- **Lack of visibility into routing policy effects:**
  - Routing policies are widely used but there's no standardized way to monitor which specific attributes are being modified and how frequently these modifications occur.
  - Limited operational insights to :
    - Track route modifications through routing policies.
    - Understand policy impact.
    - Detect misconfigurations.
    - Routing behavior change.

# Solution

- Report BMP statistics to indicate which route attribute were modified by the routing policy.
- Statistics are reported with address-family information.
- The BMP peer header makes these counters to be associated with a specific peer, allowing per peer level policy analysis.



# Attribute type

- Defined Attribute types are:
  - Type = 0x0001: Local Preference
  - Type = 0x0002: AS Path.
  - Type = 0x0003: MED.
  - Type = 0x0004: Community.
  - Type = 0x0005: Extended Community.
  - Type = 0x0006: Large Community.
  - Type = 0x0007: Origin
  - Type = 0x0008: Next Hop
  - Type = 0x0009: ESI
  - Type = 0x000A: AIGP
  - Type = 0x000B: Prefix SID
  - Type = 0x000C: DSCP
  - Type = 0x000D: VPN Peer ID
  - Type = 0x000E: Preferred Value
  - Type = 0x000F: IP Preference
  - Type = 0x0010: QoS Local ID
  - Type = 0x0011: Traffic Index.
  - Type = 0x0012: MPLS EXP.
  - Type - 0x0012-0xFFFF: Reserved, Vendor specific route attribute range.

# Status & Next Steps

- Review comments are welcome.
- Adoption in working group