Loc-RIB and Adj-RIB-Out Extensions to BMP

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Current State

- RFC 7854 defines access to Adj-RIB-In only

We can see this

BGP Peer-A
Adj-Rib-In (Pre)

Filters/Policy

Adj-Rib-In (Post)

And this

BGP Peer-B
Adj-Rib-In (Pre)

Filters/Policy

Adj-Rib-In (Post)
Proposal: Extend access to Adj-RIB-Out and Loc-RIB

BGP Peer-A
Adj-Rib-In (Pre)
Filters/Policy
Accepted

BGP Peer-B
Adj-Rib-In (Pre)
Filters/Policy
Accepted

Static

ISIS

We also want to see this

Adj-Rib-In (Post)

Adj-Rib-In (Post)

Loc-Rib

Adj-Rib-Out (Pre)
Filters/Policy

And this

Adj-Rib-Out (Post)
Use Cases

**Local-RIB**
- Monitor routes selected and used by the router
  - ECMP
  - Correlation with netflow/ipfix
  - Next hop preservation
- Monitor locally originated and BGP routes without requiring peering
- Policy verification

**Adj-RIB-Out**
- Monitor routes advertised to peers
- Policy verification
### Extensions to RFC 7854

#### Local-RIB
- New Peer Type 3
  - Supports backwards capability
- Flags are specific to Peer Type
- New F Flag: indicates filtered
- Using existing Stats
- Replaces “Locally Originated Routes” specified in Section 8.2
- Peer Up Info TLV Type 3 : vrf name

#### Adj-RIB-Out
- New per peer header O flag to indicate Adj-RIB-In or Adj-RIB-Out
- Added statistics Types 14-17
  - 14 = Adj-RIB-Out pre-policy
  - 15 = Adj-RIB-Out post-policy
  - 16 = Adj-RIB-Out pre-policy per AFI/SAFI
  - 17 = Adj-RIB-Out post-policy per AFI/SAFI