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

draft-ietf-grow-bmp-loc-rib
draft-ietf-grow-bmp-adj-rib-out

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Drafting status (1/2)

• Drafts first presented in Chicago (March 2017)
• Key drafts to expand BMP protocol functionality beyond the existing RFC
• Plenty of interest, feedback received and processed
• Since IETF 103 (yet again) only minor changes:
  ▪ Loc-RIB: Peer Down new reason code allowing for TLV info
  ▪ Adj-RIB-Out: minor wording
Loc-RIB: after Bangkok presentation and some hallway conversation, it is important to further clarify (not saying anything new, just stressing it):

- This is about BGP RIB, not about FIB: FIB brings L1/L2 underlays, ie. LAGs, ECMP and balancing algorithms, etc. which authors prefer to keep out of scope of this draft.
- Undoubtedly there are use-cases for FIB but perhaps a new draft could be started around those.

Still thinking we should wrap-up this effort soon and move on.
Loc-RIB and Adj-RIB-Out
Extensions to BMP

exit(0)
Loc-RIB and Adj-RIB-Out Extensions to BMP

Backup Slides
Current BMP status

RFC 7854 defines access to Adj-RIB-In only

We can see this

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

Filters/Policy

And this

Adj-Rib-In (Post)

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

Filters/Policy

Adj-Rib-In (Post)
Proposal: extend access to Adj-RIB-Out, Loc-RIB

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

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

Static

ISIS

Filters/Policy

Accepted

Adj-Rib-In (Post)

Filters/Policy

Accepted

Adj-Rib-In (Post)

We also want to see this

Loc-Rib

Adj-Rib-Out (Pre)

Filters/Policy

And this

Adj-Rib-Out (Post)

And this

Accepted
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