Deterministic Route Redistribution into BGP

draft-chen-bgp-redist-05.txt
IETF-120

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Problem Statement (Recap)

- **Uncorrelated route selection** by RIB and BGP
  - RIB: Admin-distance
  - BGP: LOCAL_PREF, AS-PATH, et al
- When redistributing a backup route into BGP
  - Non-deterministic results - depending on the order of path arrivals
- Single router and multiple-routers in a network
  - Detailed in the draft
- **Day-1 issue**
  - Lack of specification in BGP
  - Issue exists in a number of implementations
  - Requires configuration if one is aware of the issue and solution
  - Can be frustrating in network operation
Proposed Solution (Recap)

- Make it deterministic among paths with known admin-distances
  - Locally redistributed, EBGP, and aggregate
  - Compare the admin-distance first in BGP route selection
- What about IBGP routes (network-wide)?
  - Use the LOCAL_PREF for network-wide influence
  - Lower the LOCAL_PREF for redistributed backup routes
- Configuration option
  - Can be used to override the automatic setting
Updates in -05

- Addressed comments from the previous WG Adoption
- No change to the admin-distance algorithm
- Simplified the solution for the network-wide issues
  - Removed automatic mapping from "admin-distance" to LOCAL_PREF
  - Primary/backup working automatically, and config for more complex scenarios
- Enhanced backward compatibility
  - Evaluate config, and then adjust the LOCAL_PREF **only if needed and safe**

- Posted to IDR WG a reference implementation in FRR
Next Steps

- Request IDR WG Adoption