Populate to FIB Action for FlowSpec

draft-li-idr-flowspec-populate-to-fib-00.txt

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Main content

• A bit, F bit, is defined in traffic action extended community, which can be used by FlowSpec to indicate the associated specifications be installed directly in FIB (Forwarding Information Base)
Why?

- In routers, traffic flow specifications distributed by BGP FlowSpec are stored in distinct set of RIBs (Routing Information Base) according to their (AFI, SAFI) pairs.
- These RIBs are then populated to the dedicated hardware usually shared with ACLs (Access Control List).
- The dedicated hardware is much more expensive and space limited when compared with the FIB (Forwarding Information Base).
- However, the number of both ACL rules and FlowSpec specifications is large, especially when FlowSpec is used for dynamic traffic flow steering.
- So, to save the limited and expensive space of the dedicated hardware, it is better to populate some FlowSpec specifications directly to FIB if possible.
- The destination prefix based FlowSpec specifications are suitable to be directly populated to FIB.
- **We have no method to do this at present.**
How?

A new bit F is defined in traffic action extended community to indicate the associated FlowSpec specifications are suitable to be populated to FIB.

If F bit is set and the associated FlowSpec specifications can not be populated to FIB, the associated FlowSpec specifications MUST be ignored.

The new bit F is solicited to be assigned by IANA.
Next steps

• Read the draft

• Comment in the mail list

• Modify the draft according to the comments to make it stable to be accepted by the working group
Thanks