Overview

• Today, PIM Flooding Mechanism (PFM) messages are flooded on all PIM interfaces and are processed via RPF checks.
• The same messages are processed on multiple links between a pair of PIM neighbors.
• This can be avoided with an optimization solution.
Proposed Solution

- With RFC 6395 compliance, routers exchange a unique Router Identifier in their PIM Hellos.

- If the router has multiple interfaces with only one neighbor per interface, the router can check if those neighbors announce an RFC 6395 Router-ID.

- If a PIM router can see the same Router-ID for multiple neighbors, PFM message exchange can be optimized by using a new PIM Hello Option.

Figure: RFC6395 Hello Option
Proposed Solution

- A new PIM Hello Option that indicates the forwarding optimization support is introduced.
- This new option, along with the unique Router-ID, can be used to choose one link per PIM router pair to exchange PFM messages.
- The Router-ID is used in order to relax RPF check on the chosen link as well not forwarding a message back to the router it came from on another interface.
- This would reduce the number of PFM exchanges between PIM routers, which can be useful in use-cases like PFM-SD.

Figure: PFM optimization Hello Option
OptionType: TBD
Questions/Comments?