

PIM Null Register packing

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Problem Overview

- PIM uses NULL register mechanism to refresh multicast states at the RP (Rendezvous point) from the FHR(first hop router)
- One NULL register packet carries only one Multicast state (S,G) . If there are more multicast (S,G) states the total number of NULL register packets sent from FHR to the RP increases.
- This could potentially cause control plane policing drops at the RP, when there is scale which might lead to eventual expiry of the S,G entry
- This is a valid problem to solve since many customers have reported this issue

Proposal in the draft

- The draft <https://tools.ietf.org/html/draft-ramki-pim-null-register-packing-00> proposes a method to pack multiple (S,G) states in a single NULL register packet
- Multiple (S,G) could be packed in a single NULL register packet rather than sending one NULL Register per S,G
- The draft also proposes a compatibility checking mechanism among RP and FHR so as to use this new packet format if and only if the routers (RP and FHR) in the network support this format

Advantages

- Reduces the overall PIM null register packets in the PIM-SM network
- Better control plane utilization with scale