

# PIM source discovery in LHR

(draft-anish-pim-stream-discovery)

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# Present PIM source discovery

- The existing specification for PIM, requires a shared tree (\*, G) tree to be setup for each multicast group
- Once the LHR starts receiving traffic on this shared tree, it would discover the source and may switch to source path
- Once source path is established the RP shared tree is still maintained for discovering new sources for the same stream
- In addition LHR would now have to maintain a prune state to RP for not getting that particular stream over both the shared tree and source tree

# Observations

- LHR, RP and the intermediate routers have to maintain multiple states.
- An RP could easily become chocking points in the network.
- This behavior could be optimized if the LHR could have a means to know about the active sources for a multicast group.

# Connection Setup

- Creates a “targeted” adjacency between LHR and RP
  - Can use Anycast-RP address to find closest RP
- Reliable connection setup with LHR as the active element
- PORT Keep-alive could be used to maintain aliveness of session.

# Stream Receiver Interest message

- Stream Receiver Interest message is used by LHR to inform RP about its streams of interest
- Stream RI message could be for
  - Single group address
  - Group prefix
  - Any group (Wildcard)
- Stream-Register Message format itself is used by RP to notify LHR about the streams of interest
- RP can withdraw the stream when it finds doing so is appropriate
- Monitoring aliveness of streams is needed only on FHR

# Management Considerations

- Only configuration needed is an enable/disable knob for Stream discovery (No need for configure peers)
- Reliable register and Stream discovery are independent features, meaning one can be deployed without support for other
- Incremental deployment is possible
- Feature support needed only on RP and LHR
- For application needing faster path setup, wild-card joins can be used.

# Thank You

Opinions  
&  
Clarifications