Use of p2mp BFD in PIM-SM over shared-media segment
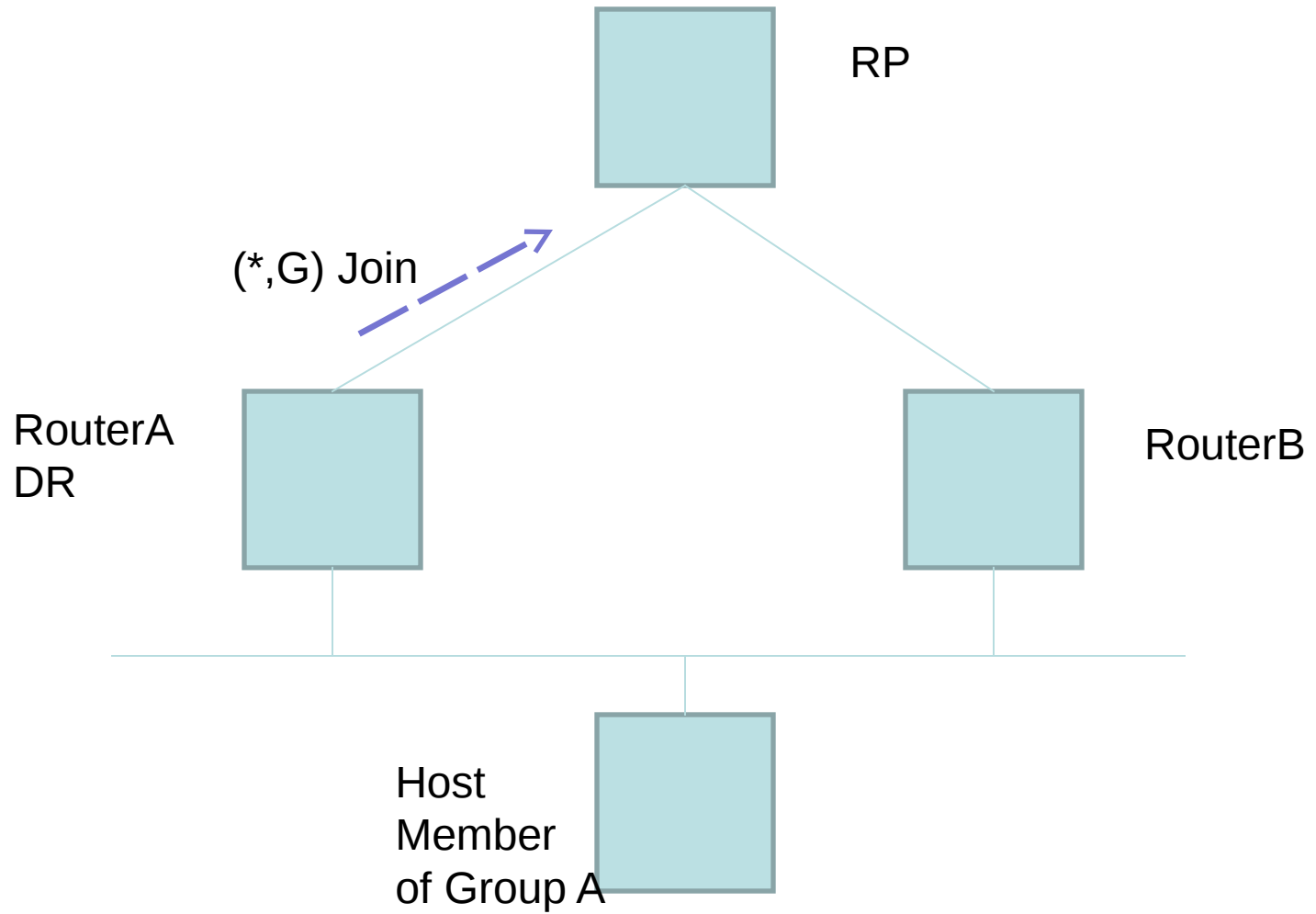## draft-mirsky-pim-bfd-p2mp-use-case

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Motivation PIM

RP

(*,G) Join

RouterA
DR

RouterB

Host
Member
of Group A

Proposed solution

- BFD for Multipoint Networks (draft-ietf-bfd-multipoint) extends BFD for use in multipoint and multicast networks

- PIM DR advertises its BFD My Discriminator in PIM Hello packet (extension to RFC 7761) to bootstrap p2mp BFD session

- Non-DR creates MultipointTail session and uses My Discriminator value from PIM Hello packet and DR's IP address to demultiplex BFD control packets

- Thus the p2mp BFD session has PIM DR router as root and non-DR routers as tails. The DR uses the same IP address it uses in PIM Hello as source IP address for p2mp BFD control packets

- In p2mp BFD there's no P-F sequence with interval negotiation and Your Discriminator must always be zeroed

Extend PIM Hello

PIM Ver	Type	Reserved	Checksum
OptionType1			OptionLength1
OptionValue1			
OptionType2			OptionLength2
OptionValue2			

Type	Length
My Discriminator	

Next steps

- Comments are welcome
- WG adoption?