PIM Backup DR
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Problem Statement

- Critical multicast service cannot accept traffic loss
- Can anything be done for faster convergence?
Have backup DR

- Backup DR (BDR) to be elected on shared LAN. It uses same algorithm defined in PIM RFC
- BDR is second best DR on LAN.
- BDR to initiate PIM join upstream.
- Only DR would be forwarding traffic on shared LAN
- Traffic resumes much faster than default one
- Current DR failed, using BFD or any other mechanism BDR detects the failure event.
- Traffic resumes much faster than default one
How it is different than “PIM DR Improvement”

• Does not require any new Hello processing.
• Easy to implement

Expectation form WG

• To look at both of the solution of same problem
• Is it worth having both solution as standard?
• Discussion to see which could come handy in terms of implementation and deployment.
• Current Version of draft might not be covering all aspect, please bring it up so that we can cover.
If new PIM router comes in up network

• New router MUST send first PIM hello with priority 0
• After “x” (TBD) PIM hello interval, new router have visibility of complete network.
  • If it is not eligible to be DR or BDR, now send hello with configured priority
  • If eligible to be DR, start building the multicast tree. After next query interval send original configured DR. and take over as PIM DR.
  • If eligible to be BDR, start building the multicast tree. After next query interval send original configured DR. and take over as PIM DR
• For “x” hello interval, we might have 3 copies of traffic coming from core. But in real network, does new PIM router come up so frequently that it requires different handling?
Initial Startup Case – Multiple PIM router coming in LAN

• As discussed in previous slide, first Hello is sent with priority 0.
• But as soon as router which has originated hello with 0, starts getting other Hello with 0 priority. And there is no PIM hello with non-zero priority, every next interval every one can send its original configured Hello.
• This would have shared LAN without DR for “x” (TBD) PIM hello interval. But does it really matter? As its time when multiple PIM router coming up first time in network. Can we live with 1 interval traffic loss?
Question & Feedback