

MVPN/MSDP SA Interoperation

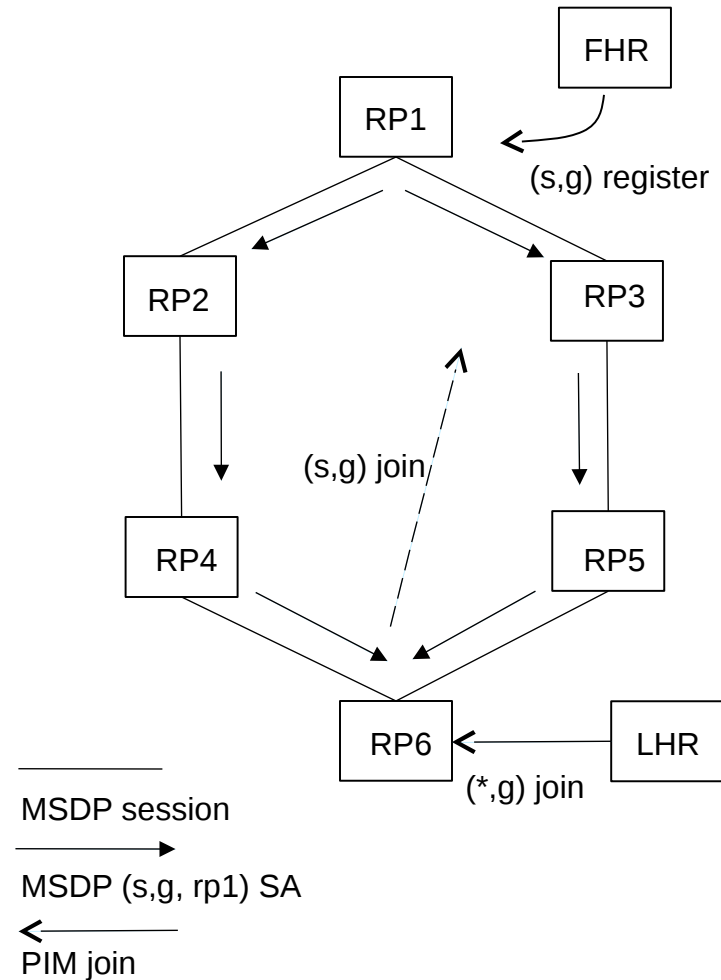
draft-zzhang-bess-mvpn-msdp-sa-interoperation

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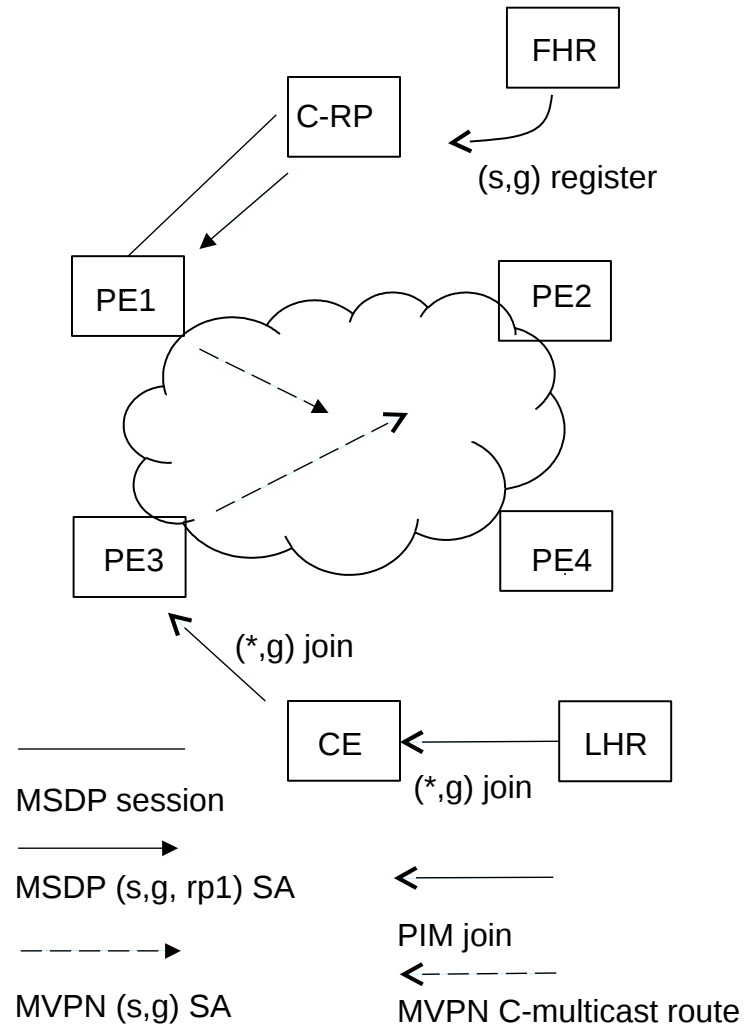
MSDP Source Active

- RP1 discover ASM sources via PIM register mechanism in its local domain and distribute (s,g, rp1) information via SA message to other RPs
- PIM (*,g) joins terminate at one of the RPs
- RP6 learns (s,g) via the SA and sends PIM (s,g) join towards the FHR
- MSDP sessions must be continuous among all RPs



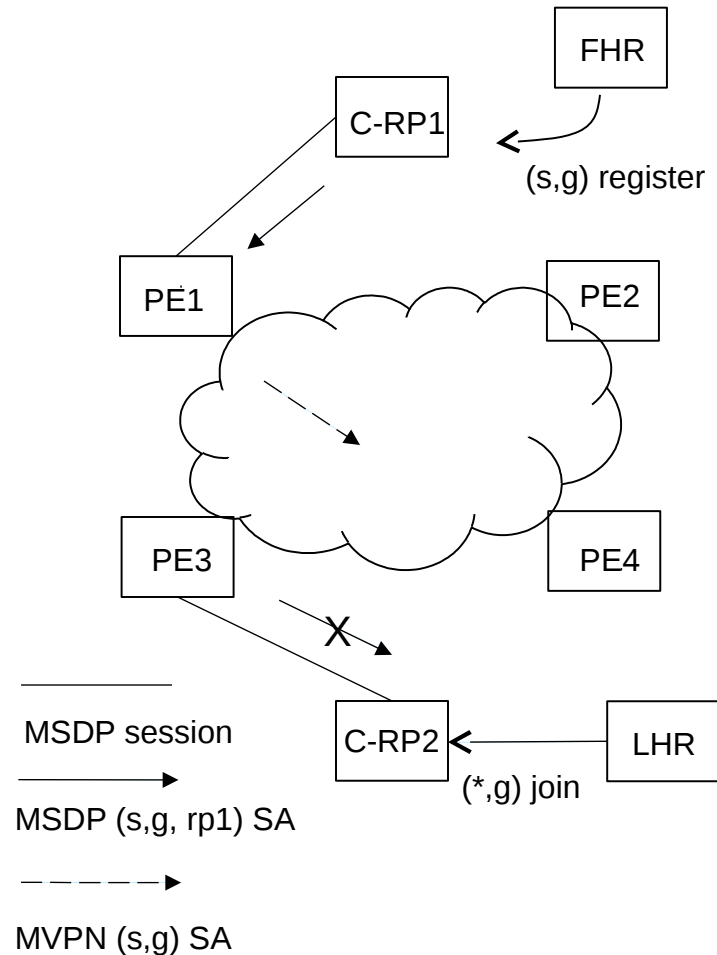
MVPN Source Active

- Inter-site source-tree-only mode
- C-RP discovers ASM sources via PIM register mechanism and distribute (s,g,c-rp) information via MSDP SA message to its MSDP peers PE1
- PE1 advertises MVPN (s,g) SA routes to all PEs
 - Note there is no RP information
- All PEs learn (s,g) via the SA and PE3 sends (s,g) C-multicast route towards its UMH PE2
 - PE3 gets (*,g) join from CE but does not send (*,g) C-multicast route
- PEs are just like RPs in the previous slide, and MVPN/MSDP SAs are similar – except one caveat



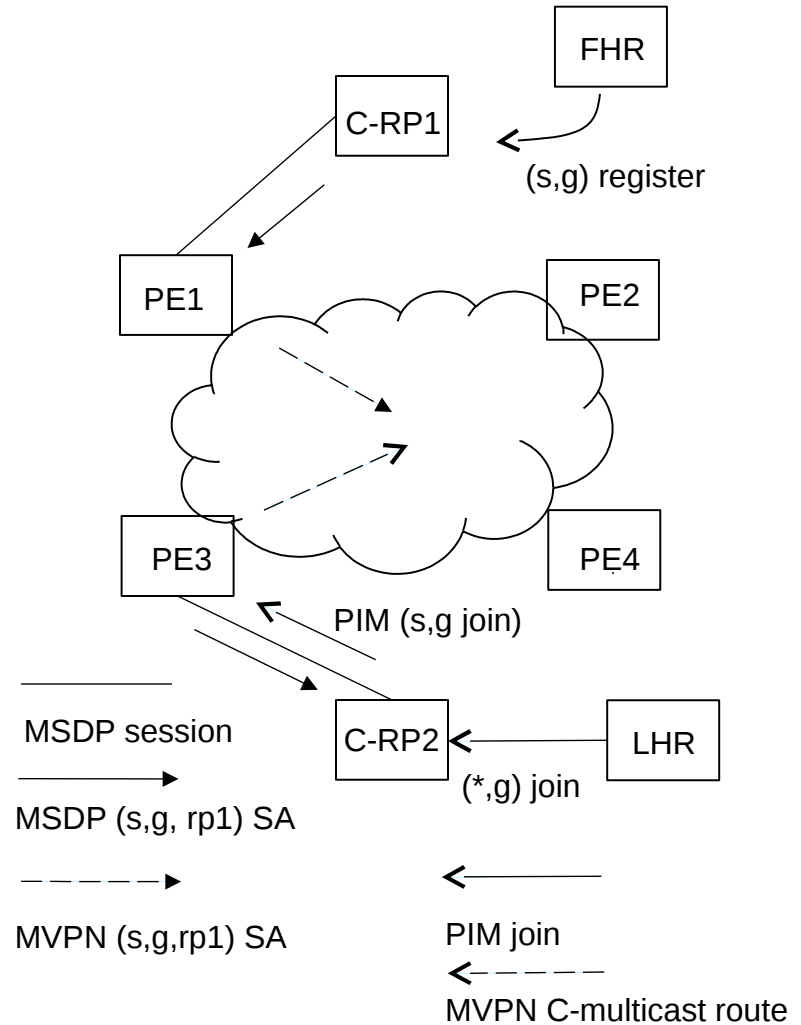
MVPN + MSDP

- A PE does NOT advertise MSDP SAs when it receives MVPN SAs!
 - RFC 6513/6514 does not specify the MVPN SA -> MSDP SA conversion
 - C-RP2 will not get MSDP SAs on its MSDP session with PE3
 - PE3 will not get (*,g) joins (as they stop at C-RP2), and will not send (s,g) C-multicast route
- There must be an MSDP session between PE1/PE3, or PE1/C-RP2, or C-RP1/PE3, or C-RP1/C-RP2
 - To ensure MSDP session continuity
 - These are per-customer MSDP sessions
 - These additional MSDP sessions will cause multiple PEs to advertise excessive MVPN SA routes



Solution

- Treat incoming MVPN SAs as MSDP SAs and trigger outgoing MSDP SAs to peers
- MVPN SA routes additionally carry an "MVPN SA RP-address Extended Community"
 - To mimic MSDP (S,A,RP)



Aren't we “deprecating MSDP”?

- Ongoing Mboned discussion about deprecating inter-domain ASM
 - Not about deprecating MSDP
 - Recommendation not mandation
- MSDP is actually widely used for intra-domain as well
 - This document is for real deployment scenarios that need interoperation between MVPN and customer MSDP infrastructure

Next Steps

- Seeking WG comments
- Seeking WG adoption