RAW multidomain extensions

draft-bernardos-detnet-raw-multidomain-00

IETF 118 – DetNet WG

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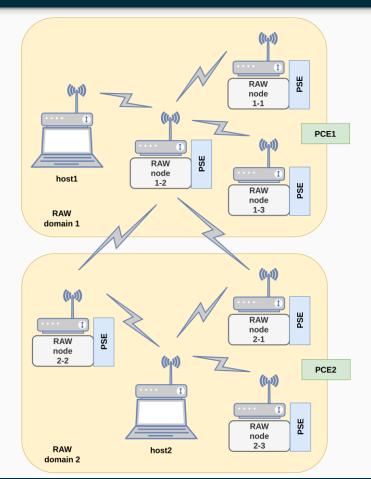
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- Scope of the RAW WG was mostly focused on single-domain
- There are scenarios requiring multidomain RAW/DetNet
 - where hosts are connected to different RAW domains and they need to communicate to each other
 - E.g., in large factories where networks might be organized in domains (per production lines or building/sites)
- Goal is to explore RAW multi-domain gaps (arch, OAM, etc) and propose solutions
 - Gaps and requirements partially covered now in <u>draft-ietf-detnet-</u> <u>controller-plane-framework-05</u>



Exemplary scenario



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- Two domains, each one with its own PCE
 Domains might be interconnected via multiple paths
- Multiple gaps:
 - Domains need to set up the interdomain connectivity (this might need discovery)
 - Multi-domain paths need to be discovered
 - There is inter-PCE work
 - Inter-domain PSE coordination



Some proposed extensions (example/initial work)

+----+-+ +---+ +---+ +---+ +---+ RAW |P| | RAW | P | | RAW |P| Inode ISI | PCE1 | | PCE2 | Inode ISI Inode ISI | 1-2 |E| | 2-1 |E| | 2-2 |E| +---+ +---+ +---+-+ +---+ +---+ 1.Path compute req| (src=node1-2, dst=node2-3, SLA) | 2.Path compute req $|(src=\{node2-1, node2-2\})|$ | dst=node2-3) | • • • • • • • • • • • > | |3.Path compute resp |({tracks2}, {links quality})| |<.... 4.Path compute resp ({{tracks1}, {tracks2}}, $PSE=\{node2-1, node2-2\},\$ {SLA1,SLA2}) $|<\cdots|$ 5.RAW inter-domain path ({{tracks1,tracks2}},{SLA1,SLA2}) 6.RAW inter-domain path ACK [7.RAW OAM(flow/track,SLA1) 7.RAW OAM(flow/track,SLA1) | $\langle \cdot \cdot \cdot \rangle | \langle \cdot \cdot \rangle$ 8.RAW OAM (flow/track, metrics)



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Work presented in the RAW WG
Good feedback, but it was early to look on extensions

Is there interest in working on this in the WG?
 Potential new protocol work might be needed

• Please share your comments on the ML!



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