Service Programming with Segment Routing

draft-xuclad-spring-sr-service-programming

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Scope

The document defines:

• Service SID behaviors
• Service metadata handling
Integration in SR architecture

• Defined in
  • RFC 8402
  • draft-ietf-spring-segment-routing-policy

• Seamless integration
  • Presence of service SIDs in a SID-list has no impact on the packet processing performance on non-service SIDs in the SID-list
  • Presence of non-service (e.g. underlay) SIDs in a SID-list imposes no restriction on the service SIDs capabilities.
Service SID behaviors

• By an SR-capable service
  • Processes packet with SR information on it
  • Processes service metadata if configured to do so
  • Moves to the next SID (MPLS POP or SRv6 End)

• By an SR proxy on behalf of a legacy service
  • Delivers a packet without SR information to the service
  • Moves to the next SID (MPLS POP or SRv6 End)

• SR-capable and proxies services can be seamlessly combined in a SID-list.
Service metadata

• Carried within the packet
• Set by the headend or an intermediate service endpoint
• Usable by any intermediate service endpoint
• Metadata lookup is triggered by the service SID
  • Only SID endpoints using the metadata look for it
• Examples: DPI information, traffic classes
  (draft-guichard-spring-srv6-simplified-firewall)
Next steps

• Ask for working group adoption
• Seek WG input and feedback