# SR Replication Segment for Multi-point Service Delivery

## draft-voyer-spring-sr-replication-segment

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# Brief History

- Work started in Jun 2018 with draft-voyer-sr-p2mp-policy-00
- Presented in Prague IETF
- Last revision was draft-voyer-sr-p2mp-policy-03
- Addressed comments on draft-voyer-sr-p2mp-policy-03 :
  - Split draft in two docs:
    - Replication segment in SPRING
    - Use of replication segment in PIM WG
- Addressed comments received on the mailing list.

# Scope of the draft

- Spring Chartered item:
  - “New types of segments mapping to forwarding behavior (e.g., local ingress replication)
- Replication Segments deliver packets to multiple nodes in SR domain
  - Direct replication from replication node to a set of downstream nodes
    - A copy of the packet is unicasted to each downstream nodes.
    - A simple replication segment doing local replication over N (unicast) SR policies.

# Replication SID

- Identifies Replication Segment in data plane
- SR-MPLS label or SRv6 SID
- Packet steering at Replication node:
  - Via local policy – PUSH operation, or
  - Active segment is Replication SID – “CONTINUE” operation
- Downstream Node that is Leaf of service executes “NEXT”

# Replication Segment

- The Replication Segment is a local segment, instantiated on a single node.
- It performs the local replication over a set of SR Policies.
- Replication State
  - List of Replication branches to Downstream nodes
  - Each replication can be:
    - Best Effort (unicast) using the prefix SID of the downstream Node, or
    - SR Policy (unicast) path to the Downstream node.
- Identified by <Replication-ID, Node-ID>
  - Replication-ID:  Unique identifier per Replication node
  - Node-ID:  Address of node where Replication segment is instantiated

# Implementation and Deployment Status

- Authors are aware of implementations
- At least one deployment planned:
  - Bell Canada in lab trials

# Next Steps

- Asking for WG adoption