

SR for SDWAN

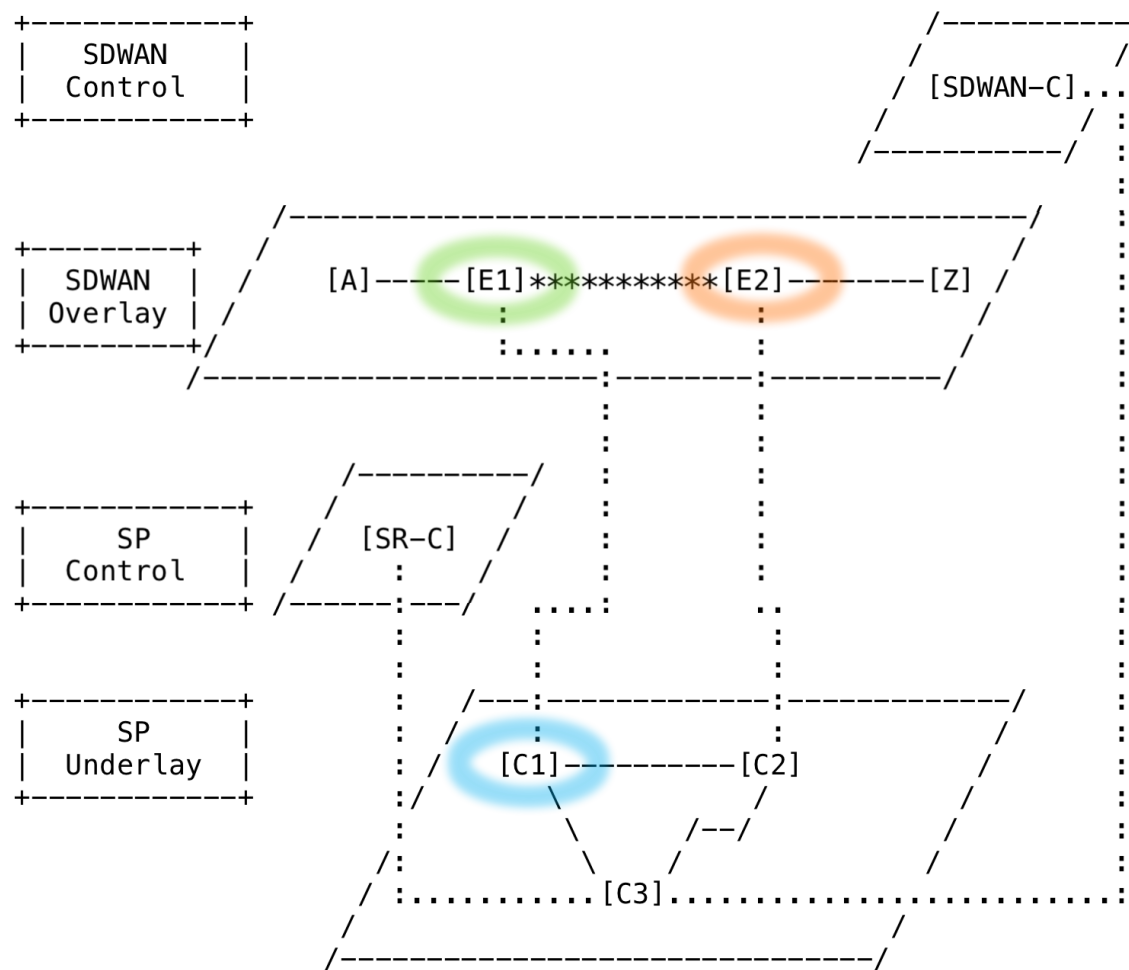
draft-dukes-sr-for-sdwan-00

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Agenda

- Forwarding
- Control Plane
- Security
- Benefits



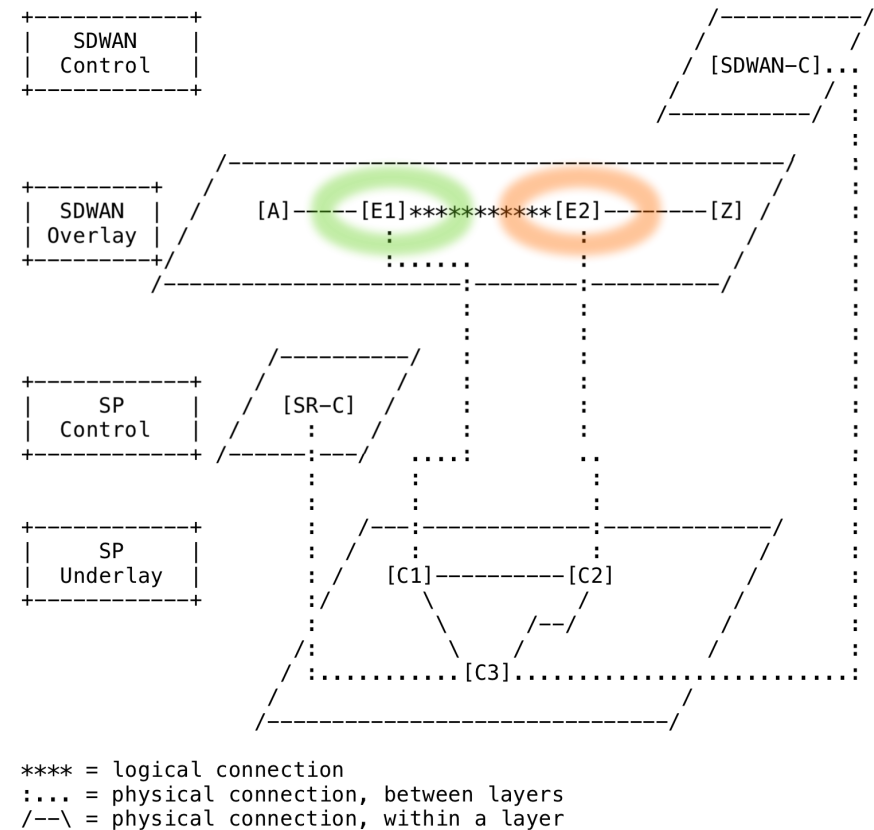
***** = logical connection
 :... = physical connection, between layers
 /--\ = physical connection, within a layer

Typical Ingress CE Node (E1):

- classify ingress traffic
- determining the egress edge node
- selecting a local output interface
- secure the traffic
- forward to the chosen egress edge node.

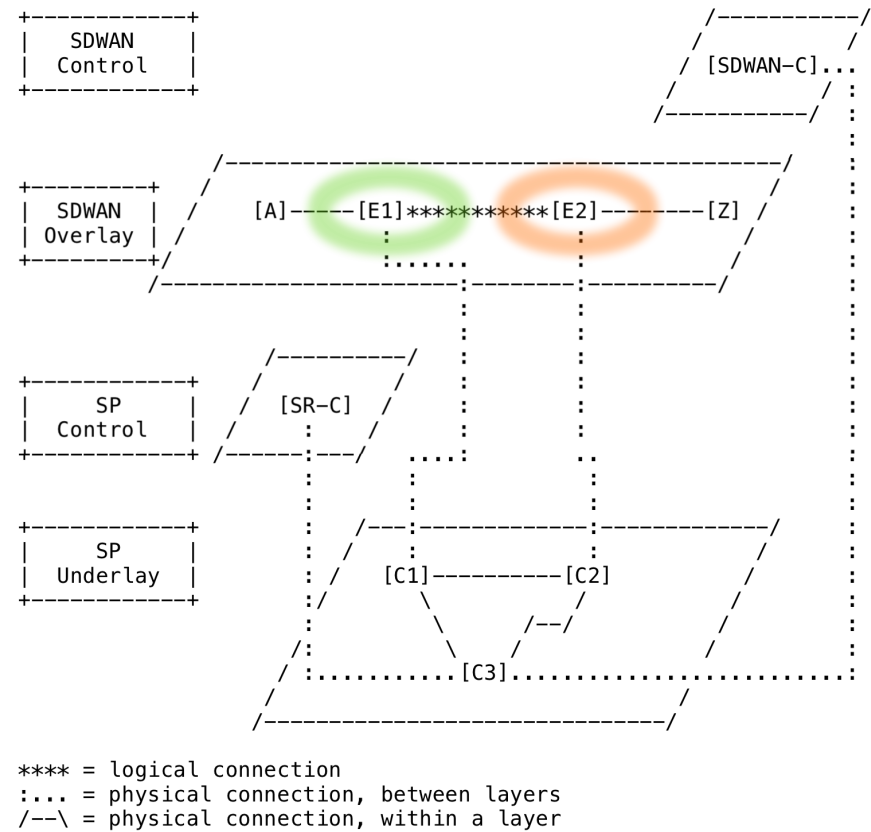
Typical Egress CE Node (E2):

- Decapsulate
- Decrypt
- Forward on the internal network.



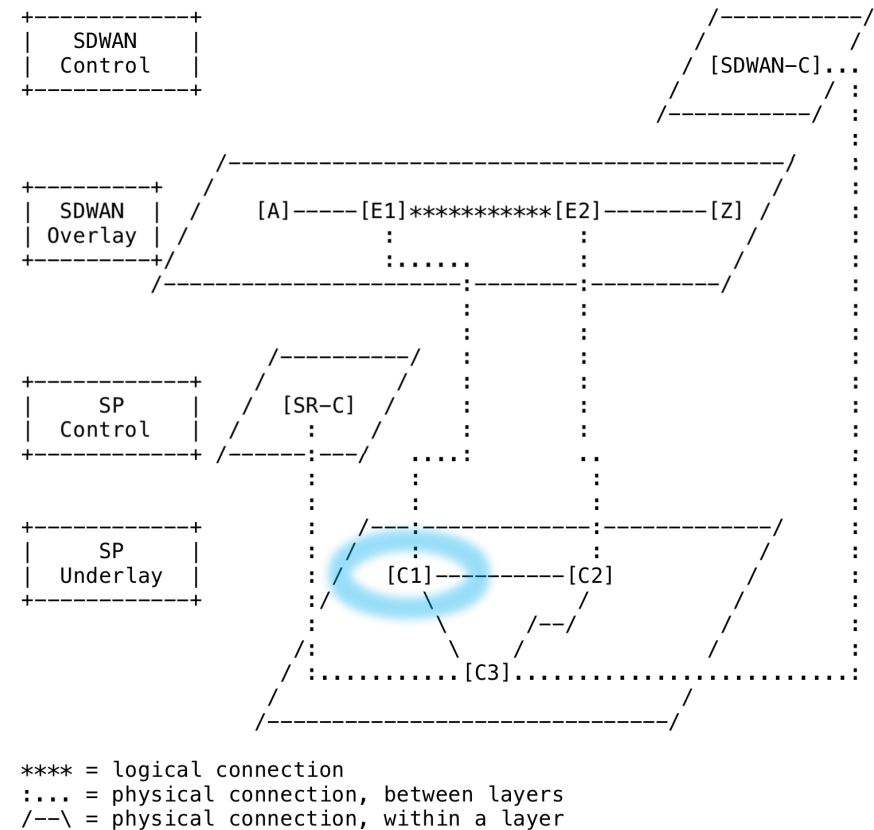
New Ingress CE Node (E1):

- Monitors and select an SR binding SID for encrypted traffic.
- Insert an SRH with two Segments <Binding SID, Egress CE address>

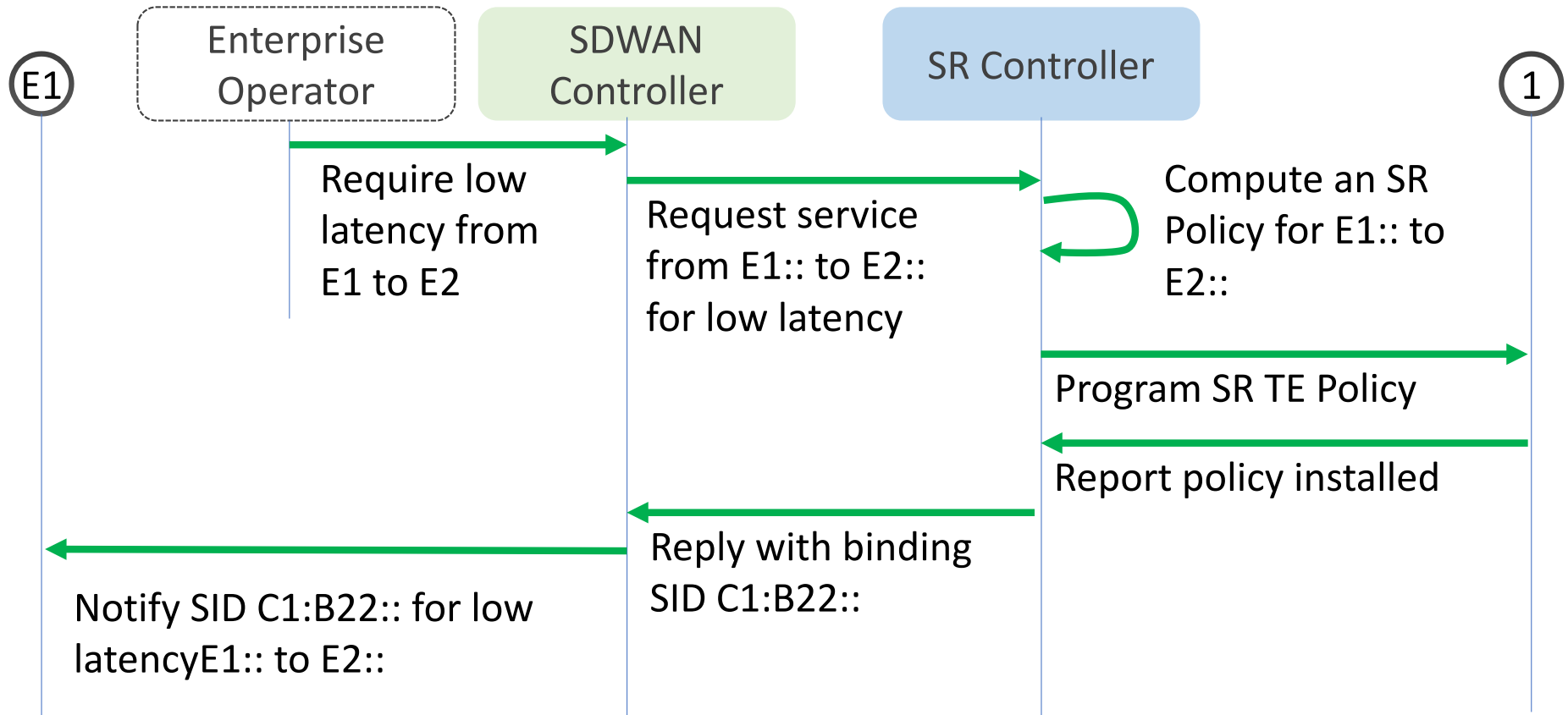


Binding SID to Policy (C1):

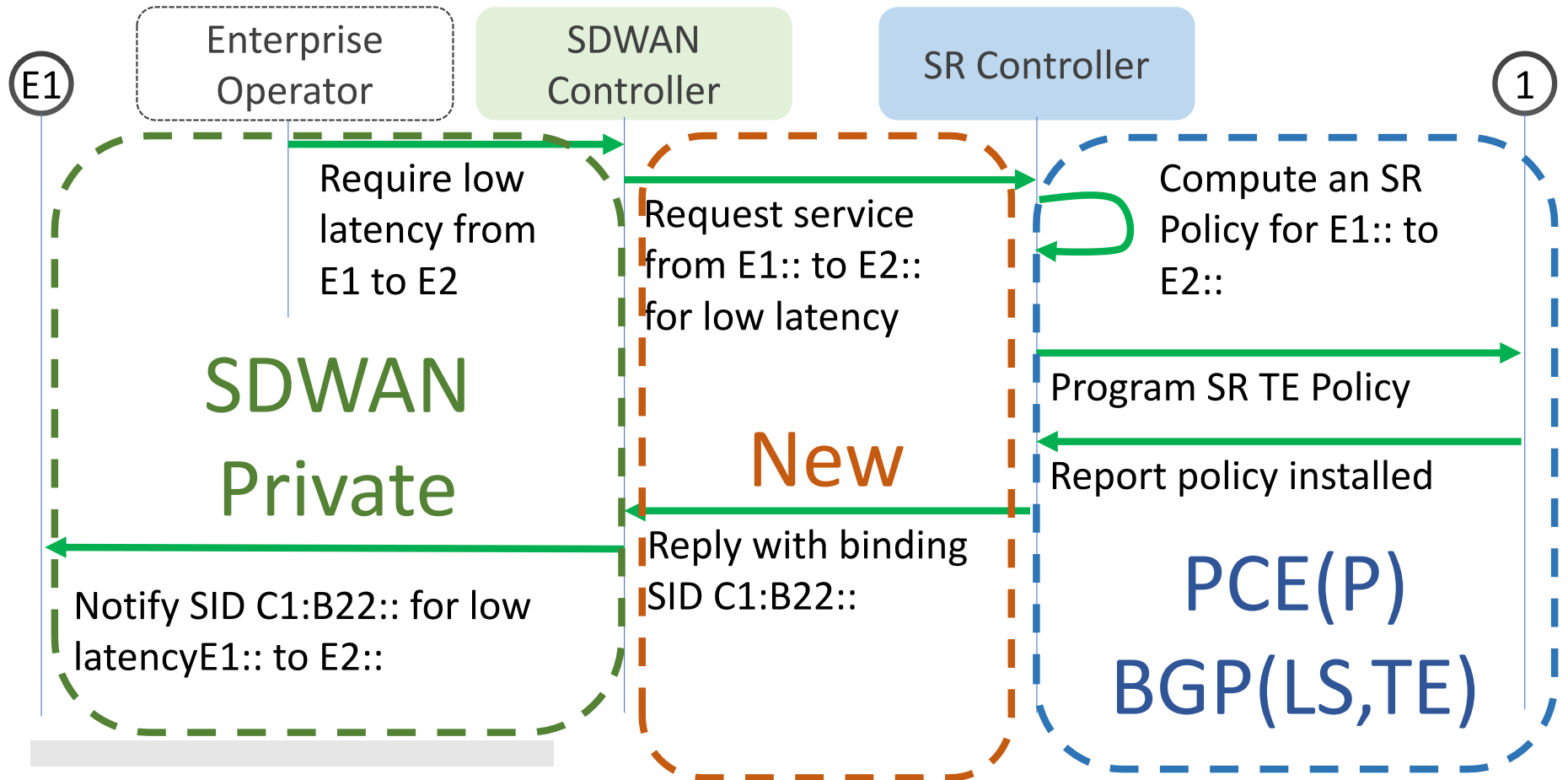
- At C1, the Binding SID applied at E1 is bound to an SR policy to reach C2.
- C2 performs Penultimate Segment Pop and removes the SRH before E2 receives the packet



Control Plane Interaction

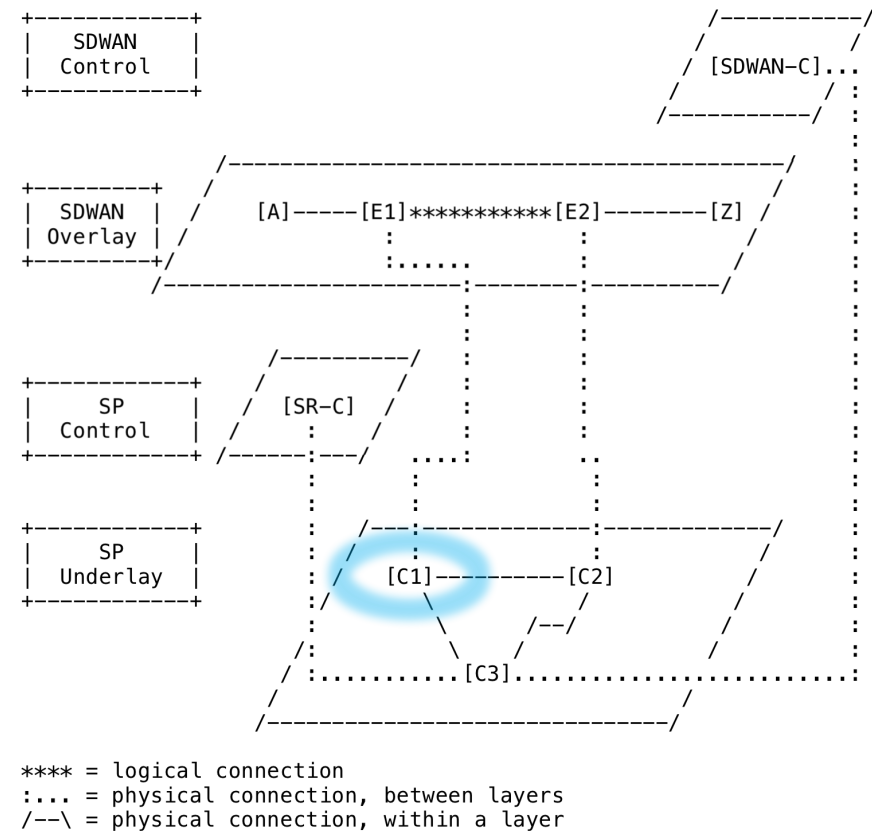


Control Plane Work... See New



Secure Use of Binding SID (C1):

- Build on Domain of Trust defined in I-D.filsfils-spring-srv6-network-programming.
- The ACL implementing SEC1 and SEC2 on node C1 is updated to specifically allow traffic from E1 to the Binding SIDs it is allowed to use.



Benefits

- Scaling
 - PE maintains SR TE Policies, binding SIDs, counters
- Billable per Customer/SLA
 - PE counts packets per binding SID
- Privacy
 - SP doesn't share topology with CE
 - CE performs classification - don't share with SP.

Next Steps...

- Continue to build out subsections not yet defined
 - Remotely connected to PE with SRv6
 - Multiple Providers with SRv6
 - MPLS Core
 - MPLS CE-PE
- Collaboration and discussion
- Questions?