

# A Framework of MPLS Global Label

## draft-li-mpls-global-label-framework-00

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# Introduction

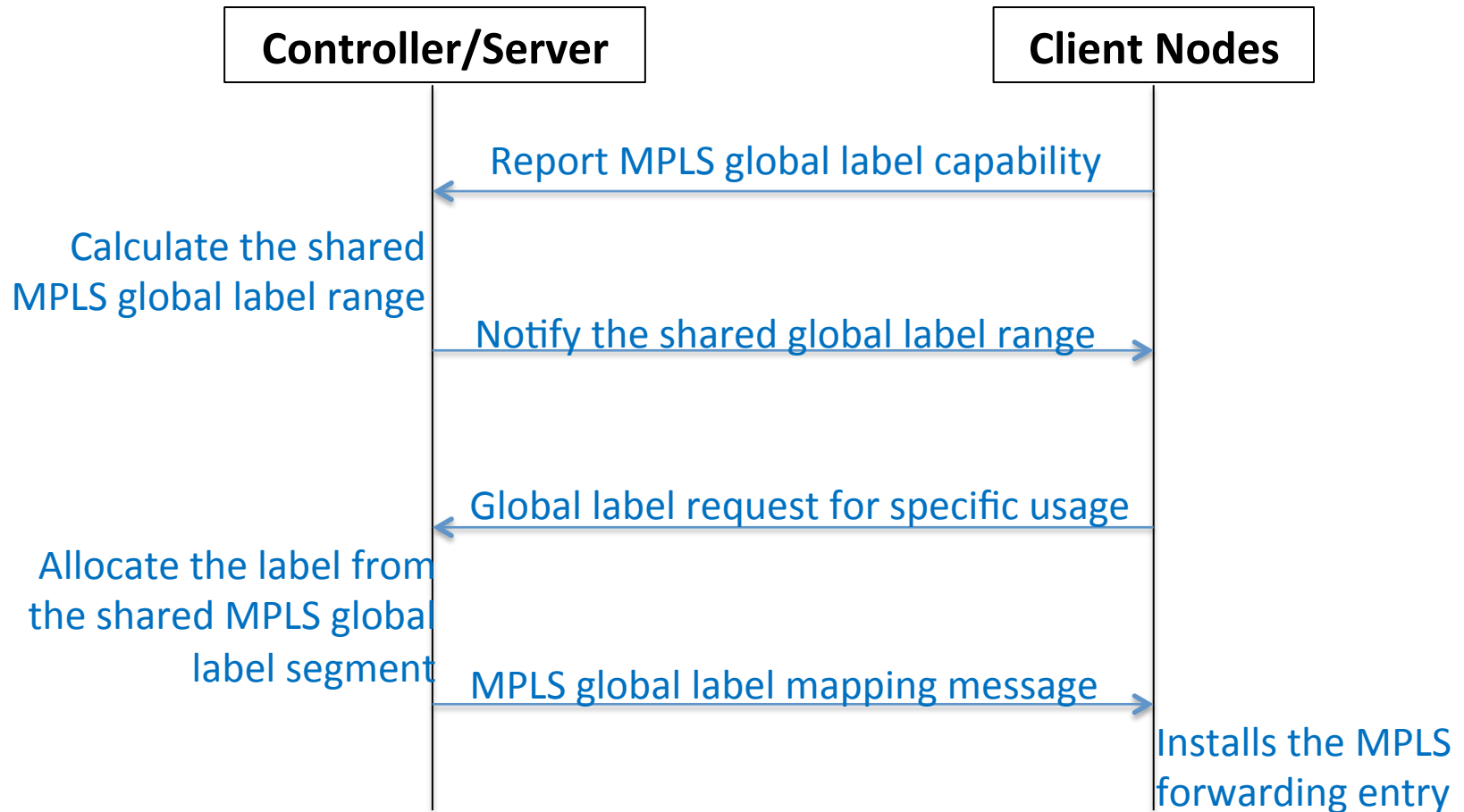
- MPLS global label can be used to identify the location, the service and the network in different application scenarios. The new solutions based on MPLS global label can gain advantage over the existing solutions to facilitate service provisions.
- [I-D.li-mpls-global-label-usecases] proposes possible use cases of MPLS global label. This draft(draft-li-mpls-global-label-framework-00 ) defines the framework for MPLS global label.
- The framework includes the representation of MPLS global label, the process of control plane and data plane for MPLS global label.

# Representation of MPLS Global Label

- Option A: Use the traditional MPLS label range. A shared label segment can be calculated for all nodes to reserve for the usage of MPLS global label.
  - Pros: Keep the same with the mechanism with the existing label mechanism.
  - Cons: There might be conflicts between the global label and the existing label range.
- Option B: Expand MPLS label range to resolve the conflicts between the global and the existing label range. E.g. [I-D.li-impls-mega-label] defines a new label stacking mechanism to expand the MPLS label range.

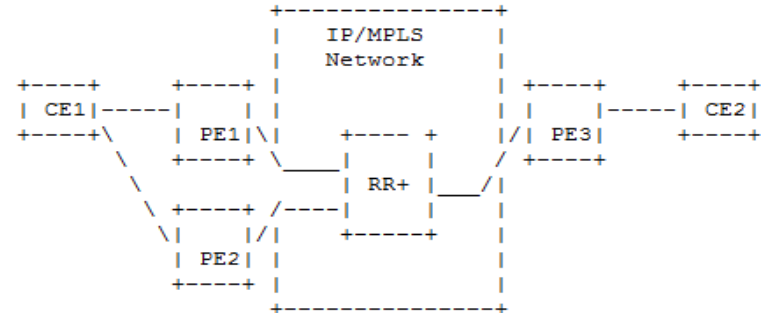
# Control plane

- MPLS global label should be allocated through a centralized controller to guarantee all nodes can have the same interpretation for a specific global label. It should adopt a central controlled architecture for MPLS global label allocation.

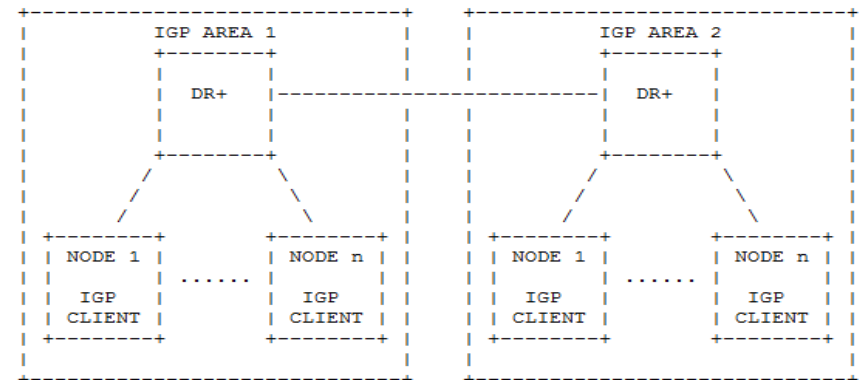


# Control plane (Cont.)

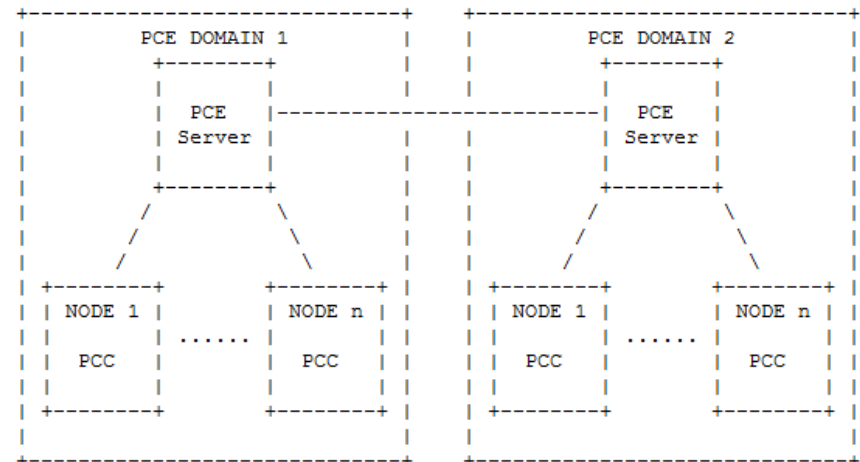
- BGP-Based Control Plane:
  - Refer to [I-D.li-idr-cc-bgp-arch].
  - Route Reflector (RR) of BGP can act as the role of the central controller. We call this type of RR as RR+.



- IGP-Based Control Plane
  - Refer to [I-D.li-rtgwg-cc-igp-arch].
  - IGP controller can act as the central controller for the MPLS global label.



- PCE-Based Control Plane
  - The PCE servers can act as the role of the centralized controller and the PCC can act the role of the client for process of MPLS global label.



# Next Steps

- Solicit more comments and feedbacks.
- Revise the draft.