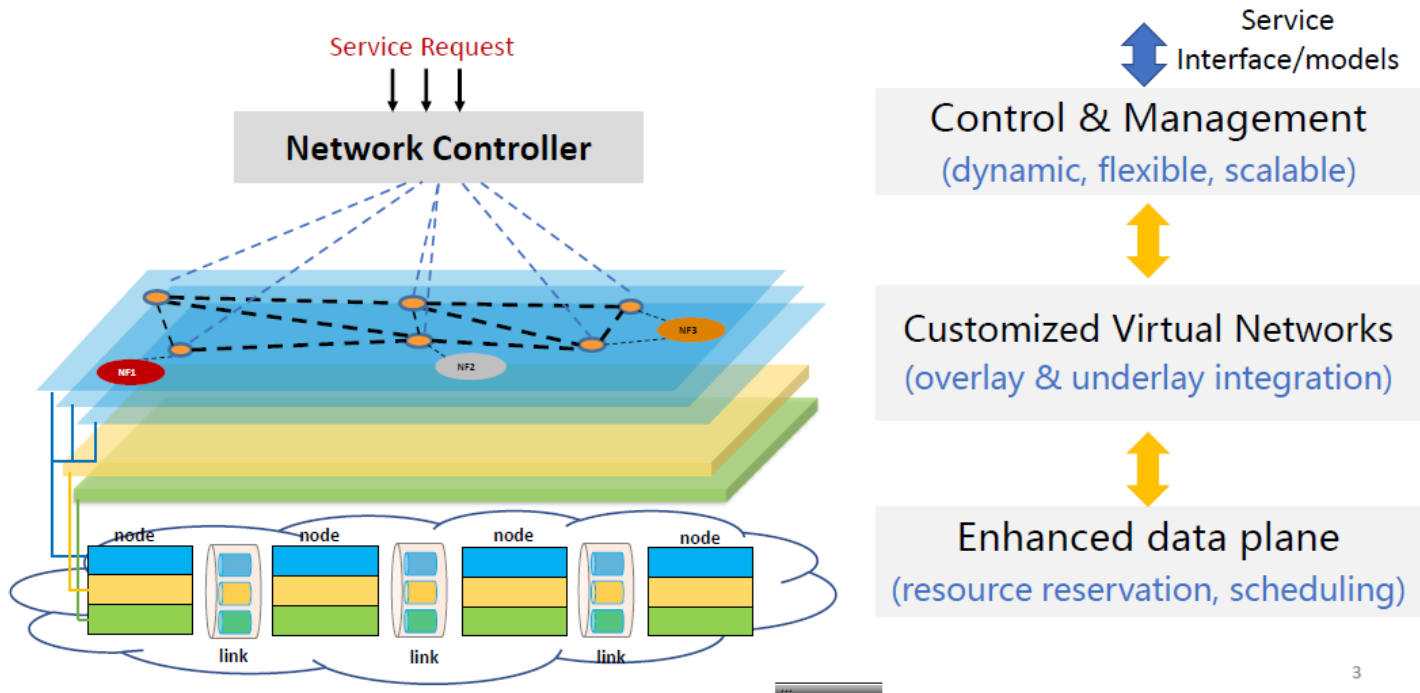


Packet Network Slicing using Segment Routing

draft-peng-lsr-network-slicing-00

Problem Statement

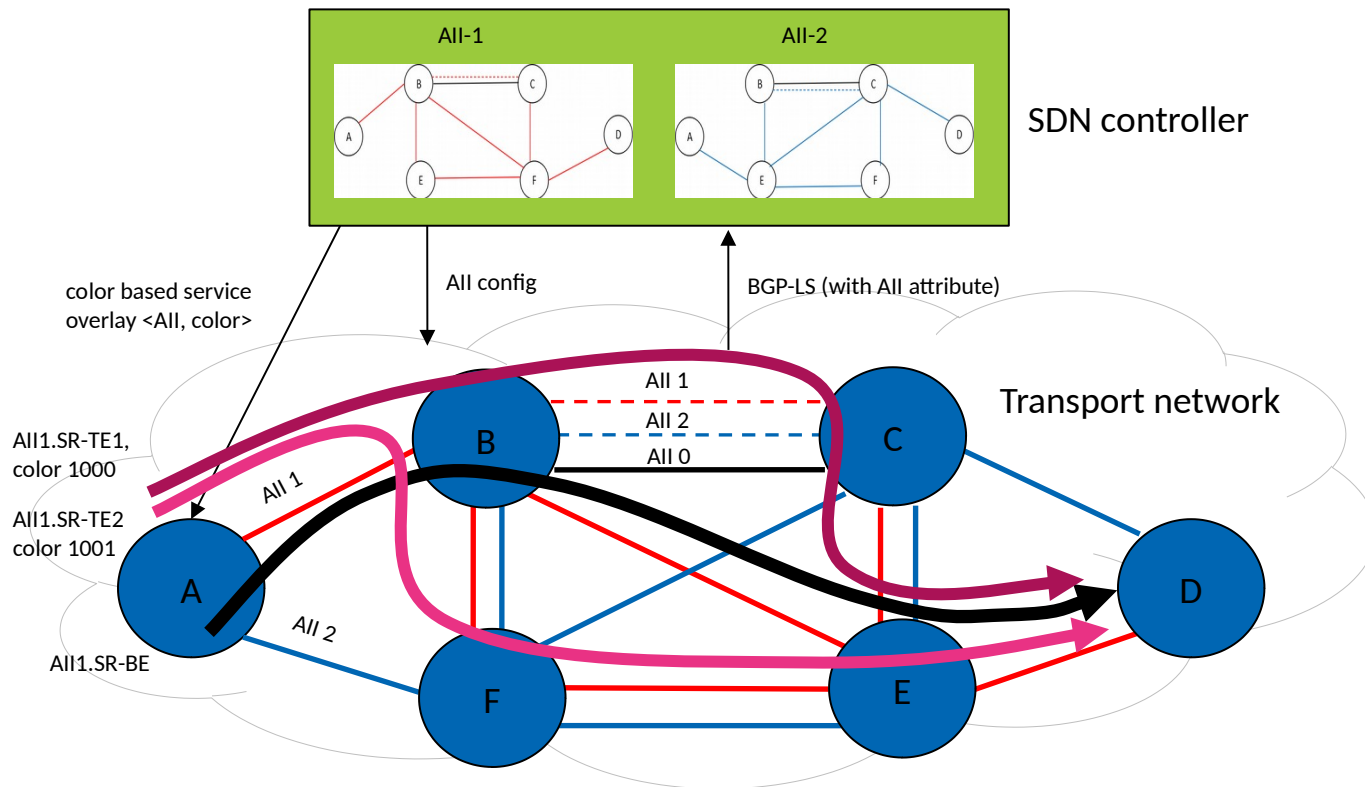
- draft-ietf-teas-enhanced-vpn-01 specifies the layered architecture of enhanced VPN .
- Based the layered architecture of enhanced VPN, This document specifies the solution to create virtual networks in a packet network.



Introduction

- Explicit virtual network identification (Administrative Instance Identifier , AI I) to meet the different service in entire network, which is not only in IGP domain but also in cross-domain Scenarios.
- All is one of constraint criteria of the color template (draft-ietf-spring-segment-routing-policy) , and color template with AI provides a more flexible control .
- Virtual network-based MP2P SR-BE for best-effort service and P2P SR-TE for traffic engineered service respectively.
- Uniform Color template (Centralized and distributed, intra and inter domain) for overlay service mapping to underlay resource.
- There is no modification to the forwarding table(dataplane).

Solution



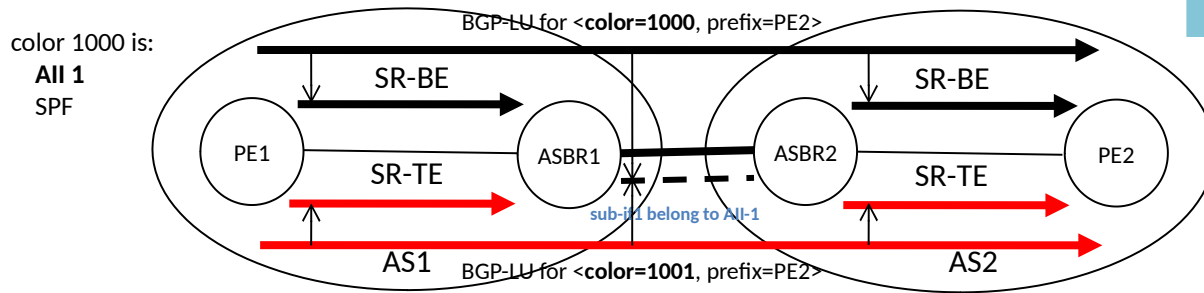
The solution to create virtual networks in a packet network

Resource Allocation
Base on the link.

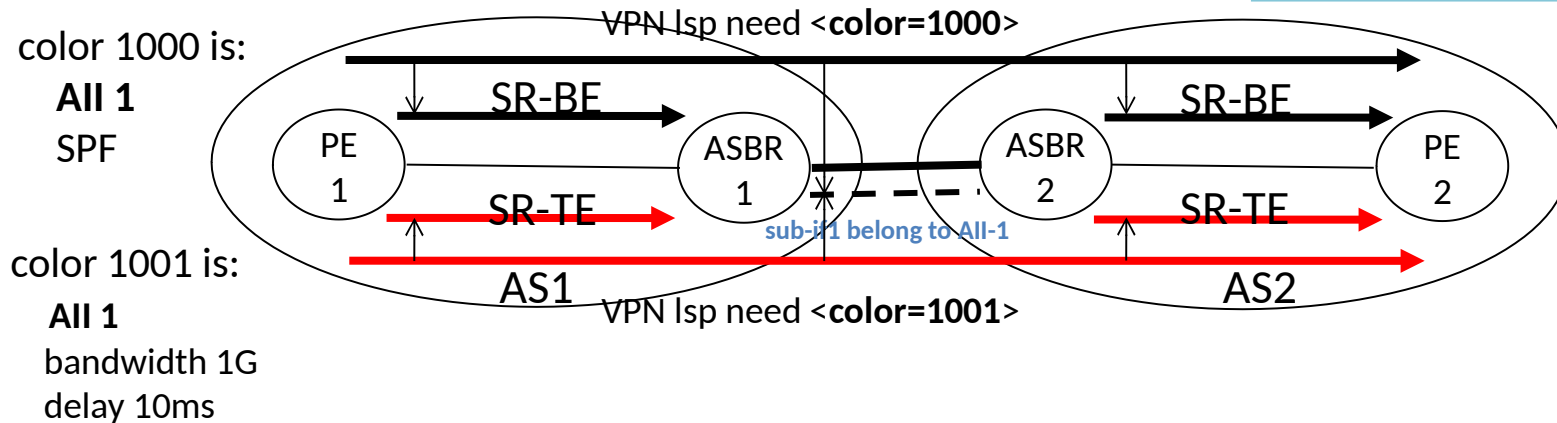
Flexible Service Overlay
AII is one of constraint criteria in the color template .CSPF for SR-BE/TE with color including AII and other constraint criteria to satisfied different service

Multi-Domain Deployment

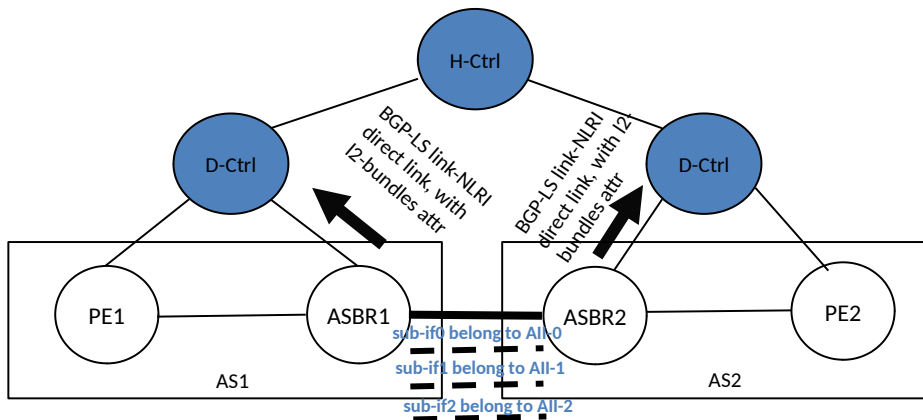
Colored BGP-LU without SDN



Option B Inter-area



Multi-Domain Deployment Cont.



E2E SR-TE with SDN

Combined with SR Flex-algorithm

- Color template with All could map to the FA-id for label stack optimization.
- When the algorithm value advertised is a Flex-Algorithm value, the Prefix SID is associated with paths calculated using that Flex-Algorithm in the associated topology All specific.

Next Step

- Comments welcome.

Thanks!