A Framework for Enhanced Virtual Private Networks (VPN+)

draft-ietf-teas-enhanced-vpn-01

Jie Dong @Huawei
Stewart Bryant @Huawei
Zhenqiang Li @China Mobile
Takuya Miyasaka @KDDI Corporation
Young Lee @Huawei

TEAS WG, IETF 104@Prague, Mar. 2019
Recap of this Draft

• Describe a framework of enhanced VPN service
  • To support the requirements of emerging services in 5G

• Summarize candidate technologies in different layers
  • Enhanced data-plane
    • Mechanisms to provide different levels of service SLA guarantee
  • Control plane
    • Centralized and distributed
  • Management plane
    • Dynamic creation, modification and deletion of VPN services with required SLA
  • OAM, Resiliency, etc.
Enhanced VPN Architecture

Service Requests

Network Controller

Service Interface/models

Centralized control & management

Integration of overlay & underlay

Enhanced underlay
Updates after IETF 103

- draft-dong-teas-enhanced-vpn-03
  - Merge ACTN enhanced vpn/network slicing into management plane section
    - draft-lee-rtgwg-actn-applicability-enhanced-vpn
    - draft-king-teas-applicability-actn-slicing
  - New coauthors and contributors
  - Some editorial changes
Updates after Adoption

• draft-ietf-teas-enhanced-vpn-01
  • Solve the received comments about scalability
    • Only a subset of VPNs require the enhanced characteristics
    • Aggregation of enhanced VPNs can reduce the state in the network
    • Avoid to introduce per-path state to the network
  • Some editorial changes
Next Steps

• Solve the received comments
• Add descriptions about inter-domain/inter-layer scenarios
• Add operational considerations
• Improve security considerations
• Polish the draft