

# LDP DoD

## draft-ietf-mpls-ldp-dod-01

Thomas Beckhaus (Deutsche Telekom AG)  
Bruno Decraene (France Telecom)  
Kishore Tiruveedhula, Nitin Bahadur (Juniper)  
Luca Martini, Maciek Konstantynowicz (Cisco)

IETF 83, Paris

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- Motivation
- Updates from -00
- Next steps

# Changes from -00

- Addressed open points from Taipei and mpls list
  - Added section Security Considerations

# Motivation

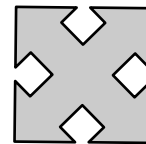
- Seamless MPLS design (draft-ietf-mpls-seamless-mpls) relies on LDP DoD for scalability and support of access devices
  - well structured access topologies
  - compute and memory constraints limiting the amount of state access devices can hold
- RFC5036 specifies LDP Downstream on Demand mode of operation
  - but LDP DoD is not widely available on modern IP/MPLS devices
- **Goal of the draft is to address that**

# LDP DoD for MPLS in access use cases and LDP DoD procedures

- Seamless MPLS access use cases drive the required LSR LDP DoD procedures for Access Nodes and border Aggregation Nodes
- *I-D.draft-ietf-mpls-ldp-dod-01* lists the access use cases and maps LDP DoD procedures against them

## LDP DoD use cases (AN, AGN)

- 1) (AN, AGN) Initial network setup
- 2) (AN) Service provisioning, activation
- 3) (AN) Service changes, decommissioning
- 4) (AN) Service failure
- 5) (AN, AGN) Network transport failures



## LDP DoD procedures (Access LSR)

- a) LDP DoD session negotiation
- b) Label request, mapping
- c) Label withdraw
- d) Label release
- e) Local repair

- All described LDP DoD procedures rely on LDP specification [RFC 5036]
  - Exception is fast-up convergence

# MPLS in access with LDP DoD baseline security

- LDP DoD relies on baseline security measures specified in LDP spec [ RFC5036 ]
  - Authenticity and integrity of LDP msgs, protection against spoofing and DoS attacks

# MPLS in access with LDP DoD additional security properties

- By design an upstream LSR accepts only mappings it sent a request for
  - This limits the potential of unauthorized third party interfering with label mapping operations on the wire
- ABR LSR acts as a gateway to MPLS core
  - Any changes of the access MPLS FECs can be easily controlled and monitored on ABR LSR

# Next Steps

- Comments please