LDP IP and PW Capability

draft-raza-mpls-ldp-ip-pw-capability-00.txt

Kamran Raza Sami Boutros

Background

- No LDP capability is exchanged for IP label switching and L2VPN/PW signaling.
- When operating in Downstream Unsolicited mode, an LDP speaker may unnecessarily advertise its local state for IP/ PW to another speaker who doesn't need it.
- This document proposes a solution by which an LDP speaker announces it "incapability" or disability or nonsupport for IP label switching or L2VPN/PW application.
- Two new capabilities are being introduced using mechanisms in LDP Capabilities [RFC5561]

IP Label Switching Capability TLV

U bit set to 1 silently ignore S Bit set to 1

Where:

bit0: IPv4 label switching application bit1: IPv6 label switching application bit2-7: Reserved.

PW Signaling Capability TLV

U bit set to 1 silently ignore S Bit set to 1 E-bit Enable PW application respectively.

Operation-1 Disabling IP/PW label applications on an ICCP session

1.LSR-1 and LSR-2 support "Dynamic Announcement" capability [RFC5561].

- 2.LSR-1 includes both the "IP Label Switching" capability TLV (with bit0-1 of "Address Family Bitmap" set to 0) and "PW Signaling" capability TLV (with E-bit set to 0) in the Initialization message.
- 3.Upon receipt of those TLVs in Initialization message, LSR2 will disable any IP/PW address/label binding state advertisement towards LSR1.

Operation-2 Disabling IP application on an established IP/PW session

- 1. LSR1 will first withdraw all its IP label state, and Address Withdraw message to withdraw its addresses.
- LSR1 will then send IP Label Switching capability TLV in Capability message towards LSR2 with bit0-1 (IPv4, IPv6) in "Address Family Bitmap" set to zero.
- 3. LSR2 will disable IP application towards LSR1 and withdraw all previous IP application label/address state

Both LSRs should continue to exchange PW Signaling application related state.

Thank You