

Label Distribution Protocol

Essentials: Characteristics & parameters of LDP

Agenda

- **Note:** Two kinds of "standard" lab topologies in MySRLab; choose "scenario" for now (auto-login not programmed for "course" version yet!)
- Review of MPLS Mod 2 from previous day (*lots* of new terminology)
 - especially Implicit and Explicit NULL (& PHP)
- Lab prep: Only a few commands are required for (link-)LDP configuration
- Theory:
 - Complete Module 2
 - Start MPLS Module 3, section 1
 - the section summary on slide 63 is a good starting point for studying for quizzes & term tests!

Assignments and Lab work

- (Assigned on Monday: read in NRS-II: Ch 11, pages 513-525)
- Due by next Monday: read in NRS-II: Ch 12, pages 527-555
- Lab 1 post-lab: due by **Fri Jan 18 @ 8am.**
- Lab 2 pre-lab: (optional) due by **Fri Jan 18 @ 8am.**
- Lab 2 post-lab: due by **11:59pm** Sat/Thu before your next lab session.
- Lab work: Nokia MPLS Lab Guide, Labs 3.1-3.3 (use all **/24** subnets)

References

- Original MPLS RFC3031: <http://tools.ietf.org/html/rfc3031> (updates exist)

Cross-ref: MPLS Course & NRS-II book

Here's a handy chart for when you're studying!

MPLS Course		NRS-II book	
1	Intro to MPLS	11.1-11.3	Intro to MPLS
2	Fundamentals	11.4-11.8	Intro to MPLS
3	LDP	12	LDP
4	RSVP	13	RSVP-TE Operation
5	Traffic Engineering	14,15	RSVP-TE: Routing & Reservations
6	Resiliency; FRR	16	Resiliency

Lab Prep

Very few commands are required for basic (link-) LDP. Compare with OSPF:

OSPF

```
A:R1># config router
A:R1>config>router# ospf
```

```
-----
area 0                                Protocol specific
                                     params
interface system } May need to
exit              } add system i/f
interface toR2   }
exit             }
interface toR3   } List all the
exit             } participating
interface toR4   } interfaces
exit             }
```

LDP

```
A:R1># config router
A:R1>config>router# ldp
```

```
-----
interface-parameters
interface "toR2" }
exit             }
interface "toR3" } List all the
exit             } participating
interface "toR4" } interfaces
exit             }
```

... and then lots of show commands to see what's happening!

Module 3, Section 1 Summary

- Link vs Targeted (... LDP)
- LDP parameters
- Session establishment and "maintain-ance"
- OAM lsp-ping and lsp-trace