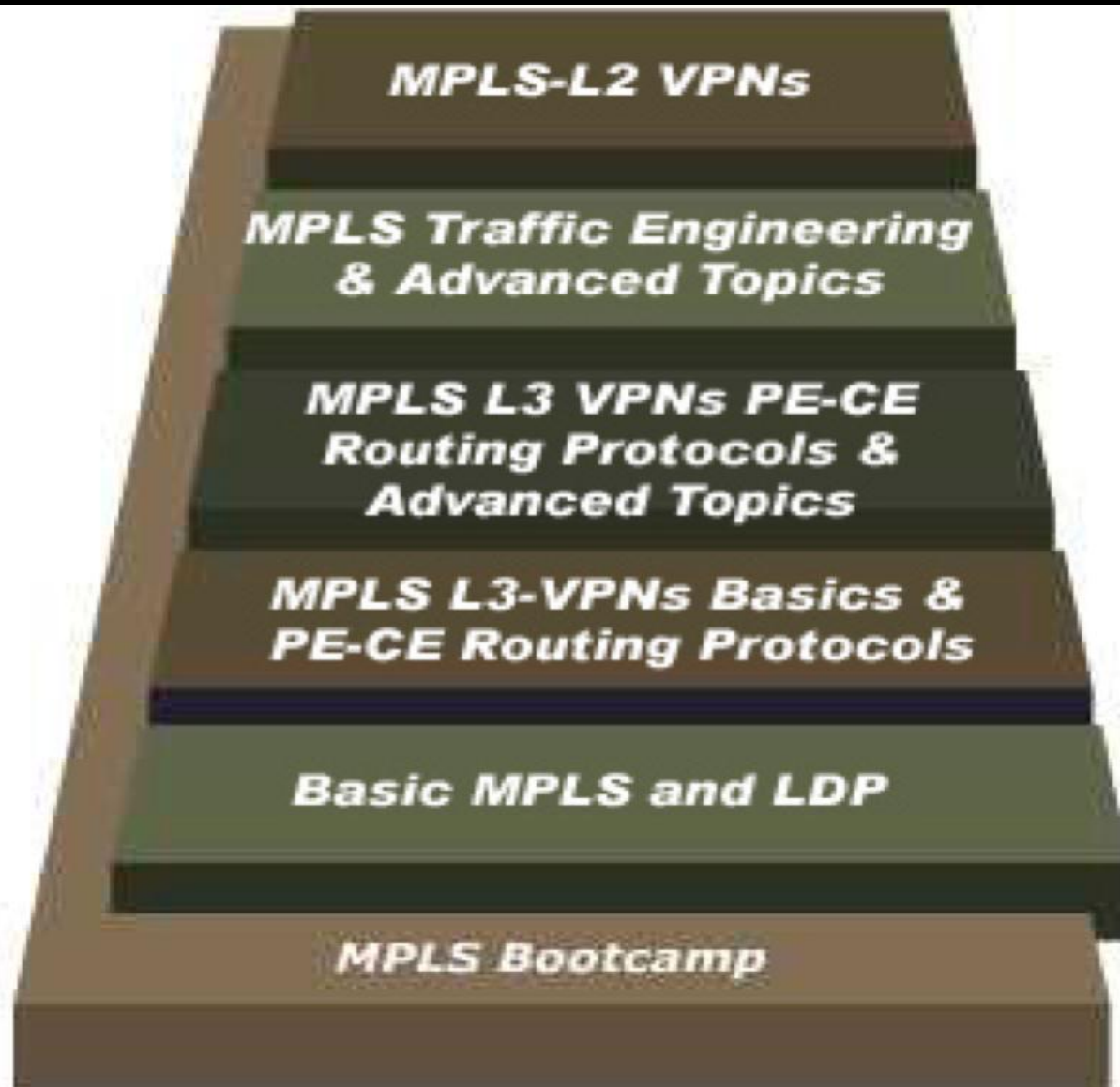




SANOG 21: MPLS Network Design and Deployment Workshop Agenda

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Workshop Structure



Module Format

1 Lecture Material
approx. 2-5 hrs.



2 Hands-On Lab
approx. 3-8 hrs.

MPLS Workshop: Pre-requisites

- Participants should have an understanding of, and some experience with, the following:

Cisco IOS ☺

Use of Access-lists, Route-maps

Network design familiarity

Familiarity with LAN/WAN technologies

Cisco router maintenance basics

Design and implementation of IP addressing schemes

Routing Information Protocol (RIP) basics

Enhanced Interior Gateway Routing Protocol (EIGRP) basics

Open Shortest Path First (OSPF) basics

Border Gateway Protocol (BGP) basics

Day 1 Agenda

Day 1 Modules

Why MPLS is needed ???

How labels are advertised and stored

What protocols are used to distribute labels

Lab Overview & Initial Configuration Lab

LUNCH

LDP: LDP concepts, configuration and troubleshooting

MPLS Basics Configuration Lab

Day 2 Agenda

Day 2 Modules

Basic concepts of VPNs

MPLS L3VPNs Basic concepts

Route Distinguisher, VRF and Route-Target

Why MP-BGP is used between PE routers

L3VPN concepts and configuration

MPLS L3 VPNs Initial Configuration Lab

LUNCH

PE-CE routing protocols such as static routing

Hub and Spoke L3VPN concepts and configuration

BGP as a PE-CE routing protocol

MPLS L3 VPNs PE-CE Basics Configuration Lab

Day 4 Agenda

Day 3 and 4 Modules

RIP as a PE-CE protocol

Different ways of providing Inter-AS L3VPNs

Scalability in Inter-AS L3VPNs

MPLS L3 VPNs PE-CE Configuration Lab

LUNCH

Multi-VRF (VRF-lite) CE

Ways of providing Internet access with L3VPNs

MPLS L3VPN troubleshooting

MPLS L3 VPNs Advanced Configuration Lab

Day 5 Agenda

Day 5 Modules
MPLS L2 VPNs
MPLS L2 VPNs Configuration Lab
LUNCH
MPLS Traffic Engineering
MPLS TE Configuration Lab

