Hands-on Advanced Networking Topics: BGP, BGP Hijacking, MPLS, MPLS-based VPNs, Segment Routing, and others

> Jorge Crichigno University of South Carolina http://ce.sc.edu/cyberinfra jcrichigno@cec.sc.edu

WASTC 2021 virtual Faculty Development Weeks (vFDW) June 16, 2021



MPLS and Advanced BGP Topics Lab Series overview



Lab Series: MPLS and Advanced BGP Topics

- Lab 1: Configuring Multiprotocol BGP
- Lab 2: IP Spoofing and Mitigation Techniques
- Lab 3: BGP Hijacking
- Lab 4: Introduction to MPLS
- Lab 5: Label Distribution Protocol (LDP)
- Lab 6: Virtual Routing and Forwarding (VRF)
- Lab 7: MPLS Layer 3 VPN using MP-BGP
- Lab 8: Ethernet VPN (EVPN) using MP-BGP
- Lab 9: Introduction to Segment Routing over IPv6 (SRv6)

Organization of Lab Manuals

Each lab starts with a section Overview

- > Objectives
- Lab topology
- Lab settings: passwords, device names
- Roadmap: organization of the lab

Section 1

- Background information of the topic being covered (e.g., fundamentals of BGP)
- Section 1 is optional (i.e., the reader can skip this section and move to lab directions)

Section 2... n

Step-by-step directions

