WEEK 4

Linux Hands-on - Virtualization and IP Networking Labs on Routing & Switching

Prerequisite Modules: Computer Systems Refresher and Bash Kick-start, Bash Hands-on and Linux Internals Kick-start, Linux Hands-on - Virtualization and IP Networking Basics

Sr. No.	Topic	Difficulty Level (L, M, H)	Lab Outline	Comments	Completed (Y/N)
1	Bash professional scripting	M	N/A	Professional coding style and guidelines. Config file creation, text processing Using sed and grep	Y
2	Virtualization (part-III)	M	Write a set of bash scripts with a config file to: * Boot a set of KVM Vms * Create L2 Switch (Bridge) * Add VM interfaces to allocated Switches	KVM XML Files Manually modify XML files for VM definitions	Y
3	Bridging/L2 Internals (PART-I)	M	Define Communication Scenarios: 1) Intra-Subnet 2) Inter-Subnet But Different Switches 3) Inter-Subnet But Single switch 4) Inter-Subnet But Single switch with malicious frames Split the network in half (Zone1 and Zone2) on two physical machines across Ethernet interfaces joined over a virtual bridge.	L2 MAC Internals, L2 to L2 communication, security	Y
4	Routing/L3 Internals (PART-I)	M	In WEEK3 we learnt the very basic routing that was Done automatically by the router VM. In this lab we Define the Routing Tables manually by using 'route' Utility. Define routing tables in both Routers Vms running in the two physical machines we used in #4 above.	Routing tables internals, IP Forwarding Note: Continued for WEEK-5	Y
		L = 0 **L → M = 0** **M = 4** **M → H = 0** **H = 0**			