Lab N° 1
Basic Router and Switch Configuration

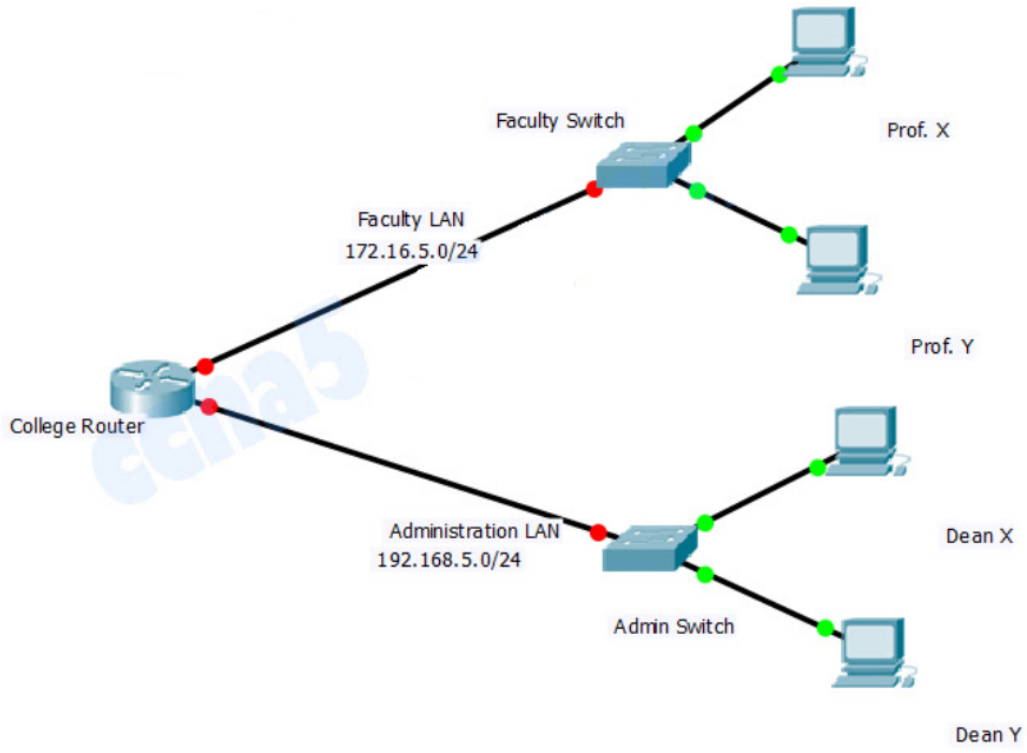
Objectives

- Perform basic device configuration tasks on a router and a switch
- Configure IP addressing settings on network devices
- Verify Layer 3 connectivity

Scenario

You are asked to build and configure a small campus network composed of a router, two switches, and multiple hosts. You must configure the network and ensure full connectivity between all devices.

If a value is not explicitly provided, you may choose a reasonable value. However, default gateway values must be correct to ensure communication.



Device	Interface	Address	Subnet Mask	Default Gateway
College	G0/0	172.16.5.1	255.255.255.0	N/A
	G0/1	192.168.5.1	255.255.255.0	N/A
Faculty	VLAN 1	172.16.5.2	255.255.255.0	
Admin	VLAN 1	192.168.5.252	255.255.255.0	
Prof X	NIC	172.16.5.10	255.255.255.0	
Prof Y	NIC	172.16.5.11	255.255.255.0	
Dean X	NIC	192.168.5.10	255.255.255.0	
Dean Y	NIC	192.168.5.11	255.255.255.0	

Requirements

1. Create the network topology as shown in the figure.
2. Determine the values that are missing from the Addressing Table
3. Configure addressing for all PCs according to the Addressing (IP, mask and default gateway)
4. Disable DNS lookup on all Cisco devices
5. Name the Faculty switch Faculty Your configuration must match this value exactly
6. Secure access to all configuration lines of the faculty switch
7. Secure access to the device configurations of the Faculty switch using the encrypted password
8. Ensure that all plain text passwords on the Faculty switch are encrypted
9. Configure an appropriate banner on the Faculty switch
10. Configure and activate VLAN 1 interface of the Faculty switch
11. Repeat the same steps (5-10) for the admin switch
12. Repeat the same steps (5-9) for the router
13. Configure the router interfaces
14. Document interfaces with descriptions on the College router interfaces and the Faculty and Admin switches virtual interfaces
15. Save your configurations.
16. Verify connectivity between all devices. All devices should be able to ping each other.