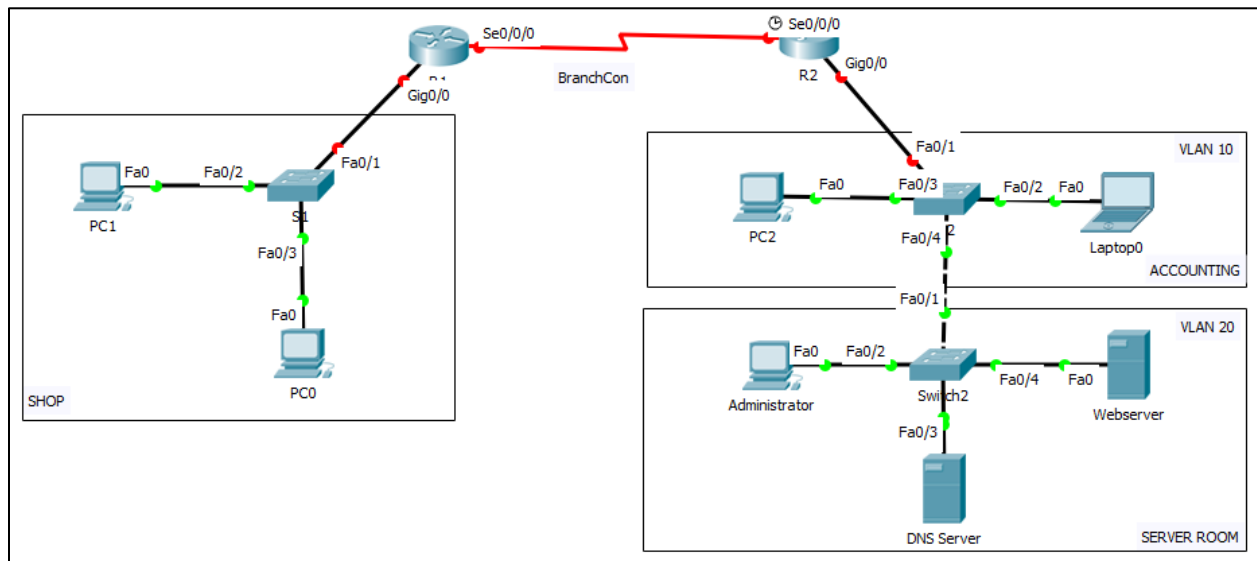


Computer networks 1

Advanced DHCP

Scenario:



A small company “CSS Sell goods” from Kaskelen opened an online shop with showroom in city of Almaty. The number of employers is not high, 128 managers operate in online shop, 63 accountants, and 10 engineers in server room, and 2 ports in BranchCon. They operate at 192.168.0.0/8 IP network.

Requirements:

1. Calculate subnetworks for each department (ACCOUNTING, SERVERROOM, SHOP)
2. Build a network topology according to the figure above
3. Add a 2-Port Serial High-Speed WAN Interface Card (HWIC-2T) at physical view of R1 and R2 to routers (first switching off devices is required)
4. Restrict access to all routers' (R1, and R2) privileged EXEC mode with password Class2015 and line vty with Grad2019 password
5. Rename each router to R1->Relay-Agent and R2->DHCP-Server
6. Create VLANs 10 and 20 for ACCOUNTING and SERVERROOM respectively at switches
7. Create a DHCP Server at router R2 and create pools for each subnetwork (ACCOUNTING, SERVERROOM, SHOP) and exclude first 5 of SERVERROOM subnetwork
8. Assign first available addresses of each subnetwork to their respective ports at routers, 2nd address of SERVERROOM to Administrator, 3rd address to DNS Server, 5th address to Webserver.pt.pka host, and 1st available address of BranchCon to R1's Se0/0/0 interface and 2nd available address to R2's Se0/0/0 interface.
9. Other devices must acquire IP addresses dynamically.
10. Permit access to router remotely only to the Administrator, and restrict others access.