***IT 341***

***Skills Exam II***

**Instructions:**

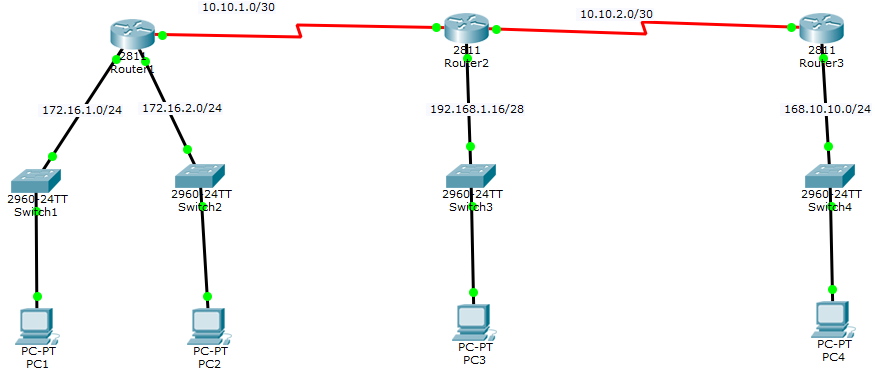
You have been provided with the required addressing table and network topology in a pkt file. Follow the instructions and complete the exam.

**Deliverables:**

Zipped folder containing:

* + Word document with answers.
  + pkt file with complete configurations.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Device** | **Interface** | **IP Address** | **Subnet** | **Default Gateway** |
| R1 | F0/0 | 172.16.1.1 | 255.255.255.0 | N/A |
| F0/1 | 172.16.2.1 | 255.255.255.0 | N/A |
| S0/0/0 | 10.10.1.1 | 255.255.255.252 | N/A |
| R2 | F0/0 | 192.168.1.17 | 255.255.255.248 | N/A |
| S0/0/0 | 10.10.1.2 | 255.255.255.252 | N/A |
| S0/0/1 | 10.10.2.1 | 255.255.255.252 | N/A |
| R3 | F0/0 | 168.10.10.2 | 255.255.255.0 | N/A |
| S0/0/0 | 10.10.2.2 | 255.255.255.252 | N/A |
| PC1 | NIC | 172.16.1.2 | 255.255.255.0 | 172.16.1.1 |
| PC2 | NIC | 172.16.2.2 | 255.255.255.0 | 172.16.2.1 |
| PC3 | NIC | 192.168.1.18 | 255.255.255.248 | 192.168.1.17 |
| PC4 | NIC | 168.10.10.3 | 255.255.255.0 | 168.10.10.2 |



**Task 1: Configure Basic Device Settings (10 Points)**

1. Setup host name for the routers as given in the topology.
2. Setup enable password: **class**
3. Setup line console password: **cisco**

**Task 2: Configure and Verify RIPv2 Routing (40 points)**

1. Configure RIPv2 as the routing protocol on the routers and advertise the appropriate networks using the network statement. (hint: determine the connected networks for each router and advertise them through RIPv2.) (15 points)
2. Prevent routing updates on the LAN Interfaces of R2 and R3. (hint: you should use passive-interface command.) (10 points)
3. Verify that RIPv2 is running on the routers. Which command would you use to confirm that RIPv2 is running? (10 points)

**Show ip protocols**

1. Examine the routing tables on all routers. What command should you use to examine the routing table content? (5 points)

**Show ip route**

**Task 3: Configure Static Routing (30 Points)**

1. From RIPv2 configuration on R2, remove the LAN network 192.168.1.16/28.

(5 points)

1. Configure a static route on R1 and R3 to reach 192.168.1.16/28 network. (15 points)
2. Verify the routing configurations by viewing the routing tables of R1 and R3. How can you confirm from the routing tables that all static routes have been added correctly? (10 points)

**When you do show ip route there should be a route with the letter S denoting it’s a static route.**

**Task 4: Saving your Configurations and Restart the Devices (5 Points)**

* Save your configuration by using the proper save command on the routers. Now, click on ‘Power Cycle Devices’ to restart the network. Please make sure to save your configurations before restarting your devices.

**Task 5: Verify Connectivity (15 points)**

* To verify connectivity, you should be able to ping between all the devices.

|  |  |  |
| --- | --- | --- |
| Source | Destination | Yes/No |
| PC1 | PC3 | **yes** |
| PC2 | PC3 | **yes** |
| PC1 | PC4 | **yes** |
| PC4 | PC1 | **yes** |