

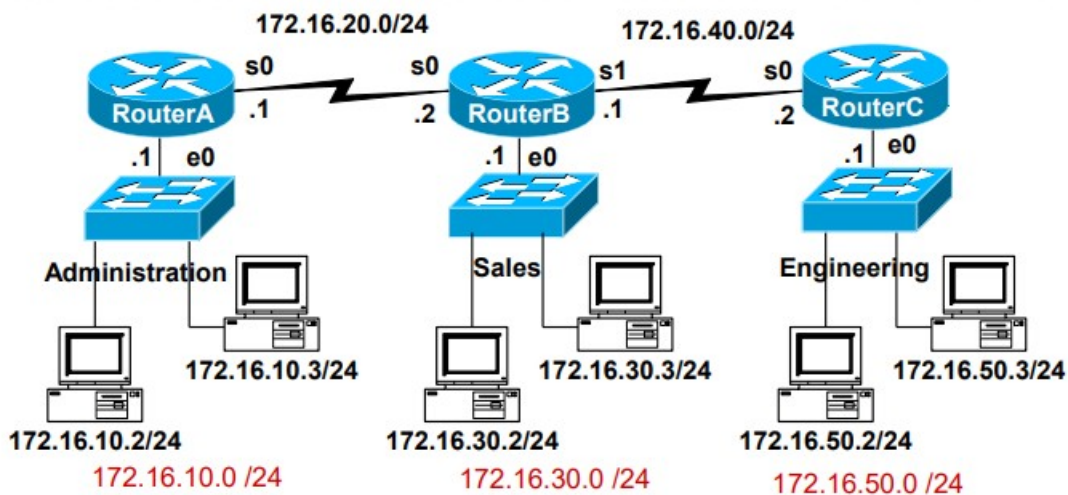


Computer Engineering Department  
Computer Networks 2 (10636455)  
Access Lists – Assignment 1  
Fall 2024/2025

**Description:**

*In this assignment you will write Access Lists for the Network Shown In the Following Figure. You will also answer some questions related to Networking and Access Lists.*

**Important Note:** Part1 and Part2 are NOT related



**Part 1:**

Suppose that Router B is an old Router and supports only **Standard Access Lists**.

**1. Write a standard Access List for Router B to achieve the following:**

**a. For traffic coming from the Engineering network and going to the Sales**

- Allow hosts in the range 172.16.50.64 ---- **172.16.50.127** with the following exceptions  
Deny hosts in the range 172.16.50.96 – 172.16.50.111 except host 172.16.50.99 which should be allowed.
- Allow hosts in the range 172.16.50.32 – 172.16.50.63, except 172.16.50.45 which should be denied

- Deny all other hosts in the remaining range 172.16.50.0 ---- 172.16.50.127
  - Remaining hosts Engineering should be allowed except hosts 172.16.50.230, 172.16.50.231 which should be denied
  - b. For traffic coming from the Administration network and going to the Sales Network**
    - Deny the traffic from hosts that can be described 172.16.10.32/28 except the host 172.16.10.33 which should be allowed
    - Deny the traffic from 172.16.10.128/25 with the exception of the sub-range 172.16.10.192 /30 which should be allowed
    - All other traffic from sales should be allowed.
  - c. Traffic going from Administration to Engineering and vice versa should NOT be affected**
- 2. Assign the Standard List written in 1 to the correct interface( or interfaces) at Router B. And explain why do we have to put it at this/these interface(s)**

**Part 2:**

**1. Write Named Extended Access List for Router A to control the Traffic coming from Sales and Engineering going to Administration.**

**Assign the List to Router A to the Best Interface**

**UDP:**

- Allow UDP traffic from 172.16.30.0 –172.16.30.31 in Sales network except host 172.16.30.22 if the destination is in the range 172.16.10.16 – 172.16.10.20 (inclusive).
- Allow UDP from the net 172.16.50.0/25 to any destination if the port number is greater than or equal 5000
- All other UDP traffic from Sales or Engineering should be denied.

**TCP:**

- Allow WEB from any source if the destination is the Web server 172.16.10.3,
- Deny TCP from the hosts from either 172.16.30.0/24 or 172.16.50.0/24 if the destination is in the range 172.16.10.0/25.
- Allow email from the Sales Network if the destination is the email server 172.16.10.2. But deny it from Engineering network
- Allow other TCP traffic from Sales or Engineering

**ICMP:**

Allow ICMP traffic from Sales and Engineering to any destination  
Deny any other traffic from Sales and Engineering

Notes: You can work in groups of 2 or 1.