CSE421 Lab 1 Q&A

Question 1:What type of cable is used to connect the Ethernet interface on a host PC to the Ethernet interface on a switch?
Answer: Copper Straight-Through

Question 2: What type of cable is used to connect the Ethernet interface on a switch to the Ethernet interface on a router?
Answer: Copper Straight-Through

Question 3: What type of cable is used to connect the Ethernet interface on a router to the Ethernet interface on a host PC?
Answer: Copper Cross-Over

Question 4: What would happen if you answered yes to the question, "System configuration has been modified. Save?"
Answer: If I answered yes, the current running configuration would be saved to the startup configuration in NVRAM, meaning any changes I made would be retained after the reload.

Question 5: Why would you want to disable DNS lookup in a lab environment?
Answer: To prevent the router from trying to resolve unrecognized commands as hostnames, which can cause delays.

Question 6: What would happen if you disabled DNS lookup in a production environment?
Answer: DNS services would be unavailable for hostname resolution, which could affect network operations requiring DNS.

Question 7: Why is it not necessary to use the **enable password** password command?
Answer: Because **enable secret** offers better security by encrypting the password and overrides the enable password.

Question 8: When does this banner display?
Answer: It displays immediately upon accessing the router.

Question 9: Why should every router have a message-of-the-day banner?
Answer: To provide a message or any guideline for users accessing the device.

Question 10: What is a shorter version of this command?
Answer: copy run start

Question 11: From the host attached to R1, is it possible to ping the default gateway?
Answer: Yes

Question 12: From the host attached to R2, is it possible to ping the default gateway?
Answer: Yes

Question 13: Check the PCs. Are they physically connected to the correct router? (Connection could be through a switch or directly.)
Answer: Yes

Question 14: Are link lights blinking on all relevant ports?
Answer: Yes

Question 15: Check the PC configurations. Do they match the Topology Diagram?
Answer: Yes

Question 16: Check the router interfaces using the show ip interface brief command. Are the interfaces "up" and "up"?
Answer: Yes
Question 17: From the router R1, is it possible to ping R2 using the command ping 192.168.2.2?
Answer: Yes
Question 18: From the router R2, is it possible to ping R1 using the command ping 192.168.2.1?

Answer: Yes

Question 19: Check the cabling. Are the routers physically connected?
Answer: Yes

Question 20: Are link lights blinking on all relevant ports?
Answer: Yes

Question 21: Check the router configurations. Do they match the Topology Diagram?
Answer: Yes

Question 22: Did you configure the clock rate command on the DCE side of the link?
Answer: Yes

Question 23: Check the router interfaces using the show ip interface brief command. Are the interfaces "up" and "up"?
Answer: Yes

Question 24: What is missing from the network that is preventing communication between these devices?
Answer: A dynamic routing protocol or static routes are not configured on R1 and R2, so routers do not know how to reach networks they are not directly connected to.

For R1:

Command: show ip route

```
R1>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.1.0/24 is directly connected, FastEthernet0/0
C    192.168.2.0/24 is directly connected, Serial0/0/0
```

Command: show ip interface brief

```
R1>show ip interface brief
Interface          IP-Address      OK? Method Status                Protocol
FastEthernet0/0    192.168.1.1     YES manual up                    up
FastEthernet0/1    unassigned      YES NVRAM  administratively down down
Serial0/0/0        192.168.2.1     YES manual up                    up
Serial0/0/1        unassigned      YES NVRAM  administratively down down
Vlan1              unassigned      YES unset  administratively down down
```

Command: show running-config

```
R1#show running-config
Building configuration...

Current configuration : 933 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R1
!
!
!
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1
!
!
!
!
!
no ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
no ip domain-lookup
!
!
spanning-tree mode pvst
!
!
!
!
!
 --More--
```

```
interface FastEthernet0/0
 ip address 192.168.1.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 ip address 192.168.2.1 255.255.255.0
 clock rate 64000
!
interface Serial0/0/1
 no ip address
 clock rate 2000000
 shutdown
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
banner motd ^C
*******************************
!!!AUTHORIZED ACCESS ONLY!!!
*******************************
^C
!
!
!
!
!
```

```
!
line con 0
 password cisco
 login
!
line aux 0
!
line vty 0 4
 password cisco
 login
!
!
!
end
```

For R2:

Command: show ip route

```
R1>show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.1.0/24 is directly connected, FastEthernet0/0
C    192.168.2.0/24 is directly connected, Serial0/0/0
```

Command: show ip interface brief

```
R2>show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        192.168.3.1     YES manual up                    up
FastEthernet0/1        unassigned      YES NVRAM  administratively down down
Serial0/0/0            192.168.2.2     YES manual up                    up
Serial0/0/1            unassigned      YES NVRAM  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
```

command : show running-config

```
R2#show running-config
Building configuration...

Current configuration : 915 bytes
!
version 12.3
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname R2
!
!
!
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCi1
!
!
!
!
!
no ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
no ip domain-lookup
!
!
spanning-tree mode pvst
!
!
!
!
```

```
interface FastEthernet0/0
 ip address 192.168.3.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 ip address 192.168.2.2 255.255.255.0
!
interface Serial0/0/1
 no ip address
 clock rate 2000000
 shutdown
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
banner motd ^C
*******************************
!!!AUTHORIZED ACCESS ONLY!!!
*******************************
^C
!
!
!
!
!
line con 0
 password cisco
 login
!
line aux 0
!
line vty 0 4
 password cisco
 login
```