

# Cisco

## Exam 100-101

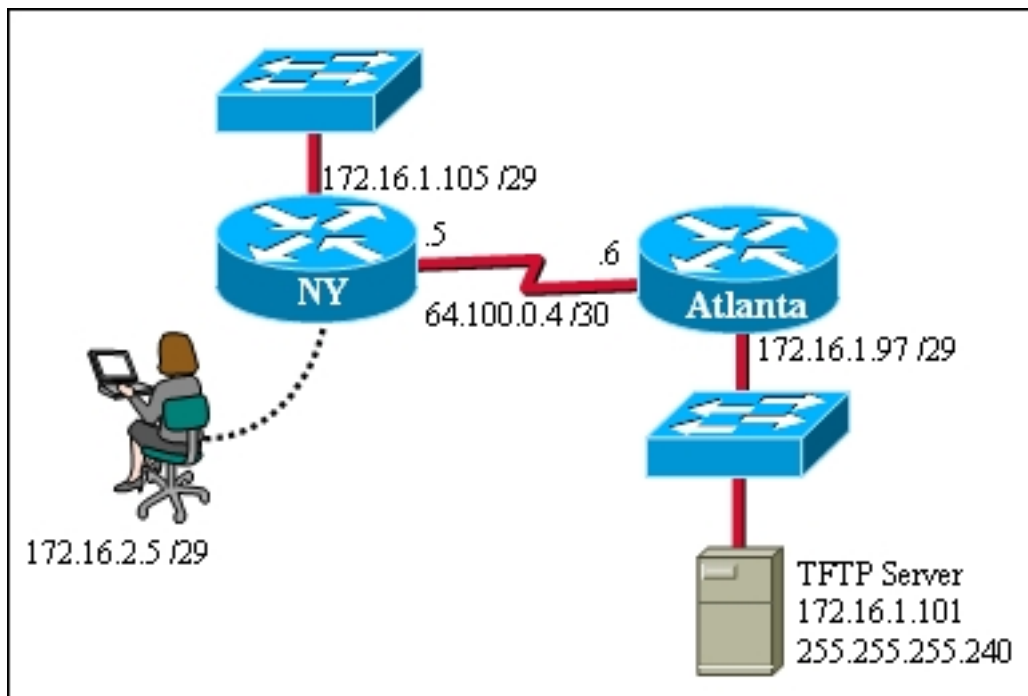
### Cisco Interconnecting Cisco Networking Devices Part 1 (ICND)

Version: 12.0

[ Total Questions: 202 ]

**Topic 7, Troubleshooting**
**Question No : 1 - (Topic 7)**

Refer to the exhibit.



A TFTP server has recently been installed in the Atlanta office. The network administrator is located in the NY office and has made a console connection to the NY router. After establishing the connection they are unable to backup the configuration file and IOS of the NY router to the TFTP server. What is the cause of this problem?

- A. The NY router has an incorrect subnet mask.
- B. The TFTP server has an incorrect IP address.
- C. The TFTP server has an incorrect subnet mask.
- D. The network administrator computer has an incorrect IP address.

**Answer: C**

**Explanation:** Explanation/Reference:

The subnet mask of the TFTP server needs to be in tune with the other network requirements else it won't be possible.

**Topic 3, IP addressing (IPv4 / IPv6)**
**Question No : 2 - (Topic 3)**

Which IP address is a private address?

- A. 12.0.0.1
- B. 168.172.19.39
- C. 172.20.14.36
- D. 172.33.194.30
- E. 192.169.42.34

**Answer: C**

**Explanation:** Explanation/Reference:

Private IP Address Ranges (RFC 1918)

Class	From	To	CIDR Mask	Decimal Mask
Class A (24 Bit)	10.0.0.0	10.255.255.255	/8	255.0.0.0
Class B (20 Bit)	172.16.0.0	172.31.255.255	/12	255.240.0.0
Class C (16 Bit)	192.168.0.0	192.168.255.255	/16	255.255.0.0

**Topic 1, Operation of IP Data Networks**
**Question No : 3 - (Topic 1)**

Which two characteristics apply to Layer 2 switches? (Choose two.)

- A. Increases the number of collision domains
- B. Decreases the number of collision domains
- C. Implements VLAN
- D. Decreases the number of broadcast domains
- E. Uses the IP address to make decisions for forwarding data packets

**Answer: A,C**

**Explanation:**

Layer 2 switches offer a number of benefits to hubs, such as the use of VLANs and each switch port is in its own separate collision domain, thus eliminating collisions on the segment.

**Question No : 4 - (Topic 3)**

An administrator must assign static IP addresses to the servers in a network. For network 192.168.20.24/29, the router is assigned the first usable host address while the sales server is given the last usable host address.

Which of the following should be entered into the IP properties box for the sales server?

- A. IP address: 192.168.20.14  
Subnet Mask: 255.255.255.248  
Default Gateway: 192.168.20.9
- B. IP address: 192.168.20.254  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.20.1
- C. IP address: 192.168.20.30  
Subnet Mask: 255.255.255.248  
Default Gateway: 192.168.20.25
- D. IP address: 192.168.20.30  
Subnet Mask: 255.255.255.240  
Default Gateway: 192.168.20.17
- E. IP address: 192.168.20.30  
Subnet Mask: 255.255.255.240  
Default Gateway: 192.168.20.25

**Answer: C**

**Question No : 5 - (Topic 1)**

Which of the following are types of flow control? (Choose three.)

- A. buffering
- B. cut-through
- C. windowing

- D. congestion avoidance
- E. load balancing

**Answer: A,C,D**

**Explanation:** Explanation/Reference:

<http://www.info-it.net/cisco/ccna/exam-tips/flow-control.php>

During Transfer of data, a high speed computer is generating data traffic a lot faster than the network device can handle in transferring to destination, so single gateway or destination device cannot handle much amount of traffic that is called "Congestion".

**Buffering**

The Technie is used to control the data transfer when we have congestion, when a network device receive a data it stores in memory section and then transfer to next destination this process called "Buffering".

**Windowing** Whereas Windowing is used for flow control by the Transport layer.

Say the sender device is sending segments and the receiver device can accommodate only a fixed number of segments before it can accept more, the two devices negotiate the window size during the connection setup.

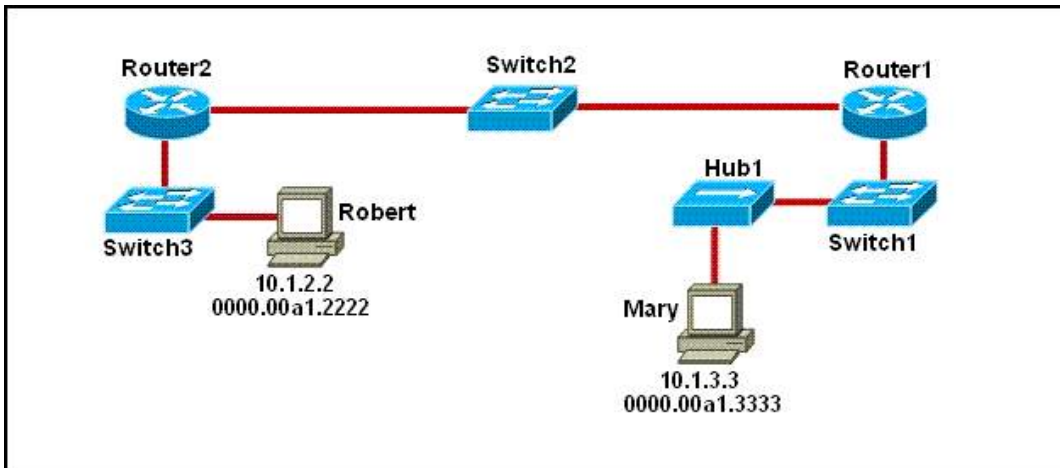
This is done so that the sending device doesn't overflow the receiving device's buffer. Also the receiving device can send a single acknowledgement for the segments it has received instead of sending an acknowledgement after every segment received.

Also, this window size is dynamic meaning, the devices can negotiate and change the window size in the middle of a session. So if initially the window size is three and the receiving device thinks that it can accept more number of segments in its buffer it can negotiate with the sending device and it increase it to say 5 for example.

Windowing is used only by TCP since UDP doesn't use or allow flow control.

**Question No : 6 - (Topic 1)**

Refer to the exhibit.



As packets travel from Mary to Robert, which three devices will use the destination MAC address of the packet to determine a forwarding path? (Choose three.)

- A. Hub1
- B. Switch1
- C. Router1
- D. Switch2
- E. Router2
- F. Switch3

**Answer: B,D,F**

**Explanation:**

Switches use the destination MAC address information for forwarding traffic, while routers use the destination IP address information.

Local Area Networks employ Layer 2 Switches and Bridges to forward and filter network traffic. Switches and Bridges operate at the Data Link Layer of the Open System Interconnect Model (OSI). Since Switches and Bridges operate at the Layer 2 they operate more intelligently than hubs, which work at Layer 1 (Physical Layer) of the OSI. Because the switches and bridges are able to listen to the traffic on the wire to examine the source and destination MAC address. Being able to listen to the traffic also allows the switches and bridges to compile a MAC address table to better filter and forward network traffic. To accomplish the above functions switches and bridges carry out the following tasks: MAC address learning by a switch or a bridge is accomplished by the same method. The switch or bridge listens to each device connected to each of its ports and scan the incoming frame for the source MAC address. This creates a MAC address to port map that is cataloged in the switches/bridge MAC database. Another name for the MAC address table is content addressable memory or CAM table.

When a switch or bridge is listening o the network traffic, it receives each frame and compares it to the MAC address table. By checking the MAC table the switch/ bridge are able o determine which port the frame came in on. If the frame is on the MAC table the

frame is filtered or transmitted on only that port. If the switch determines that the frame is not on the MAC table, the frame is forwarded out to all ports except the incoming port.

## Topic 4, IP Routing Technologies

### Question No : 7 - (Topic 4)

ROUTER# show ip route

192.168.12.0/24 is variably subnetted, 9 subnets, 3 masks

C 192.168.12.64 /28 is directly connected, Loopback1

C 192.168.12.32 /28 is directly connected, Ethernet0

C 192.168.12.48 /28 is directly connected, Loopback0

O 192.168.12.236 /30 [110/128] via 192.168.12.233, 00:35:36, Serial0

C 192.168.12.232 /30 is directly connected, Serial0

O 192.168.12.245 /30 [110/782] via 192.168.12.233, 00:35:36, Serial0

O 192.168.12.240 /30 [110/128] via 192.168.12.233, 00:35:36, Serial0

O 192.168.12.253 /30 [110/782] via 192.168.12.233, 00:35:37, Serial0

O 192.168.12.249 /30 [110/782] via 192.168.12.233, 00:35:37, Serial0

O 192.168.12.240/30 [110/128] via 192.168.12.233, 00:35:36, Serial 0

To what does the 128 refer to in the router output above?

- A. OSPF cost
- B. OSPF priority
- C. OSPF hop count
- D. OSPF ID number
- E. OSPF administrative distance

**Answer: A**

**Explanation:** Explanation/Reference:

The first parameter is the Administrative Distance of OSPF (110) while the second parameter is the cost of OSPF.

**Question No : 8 - (Topic 4)**

What is the OSPF default frequency, in seconds, at which a Cisco router sends hello packets on a multi-access network?

- A. 10
- B. 40
- C. 30
- D. 20

**Answer: A**

**Explanation:** Explanation/Reference:

On broadcast multiaccess and point-to-point links, the default is 10 seconds. On NBMA, the default is 30 seconds.

**Question No : 9 - (Topic 7)**

Refer to the exhibit.

```
WG1R2#telnet 10.3.1.2
Trying 10.3.1.2 ... Open

Password required, but none set

[Connection to 10.3.1.2 closed by foreign host]
WG1R2#_
```

Why was this message received?



- A. No VTY password has been set.
- B. No enable password has been set.
- C. No console password has been set.
- D. No enable secret password has been set.
- E. The login command has not been set on CON 0
- F. The login command has not been set on the VTY ports.

**Answer: A**

### Question No : 10 - (Topic 7)

**Instructions**

You can click on the grey buttons below to view the different windows.

Each of the windows can be minimized by clicking on the [-]. You can also reposition a window by dragging it by the title bar.

The "Tab" key and most commands that use the "Control" or "Escape" keys are not supported and are not necessary to complete this simulation.

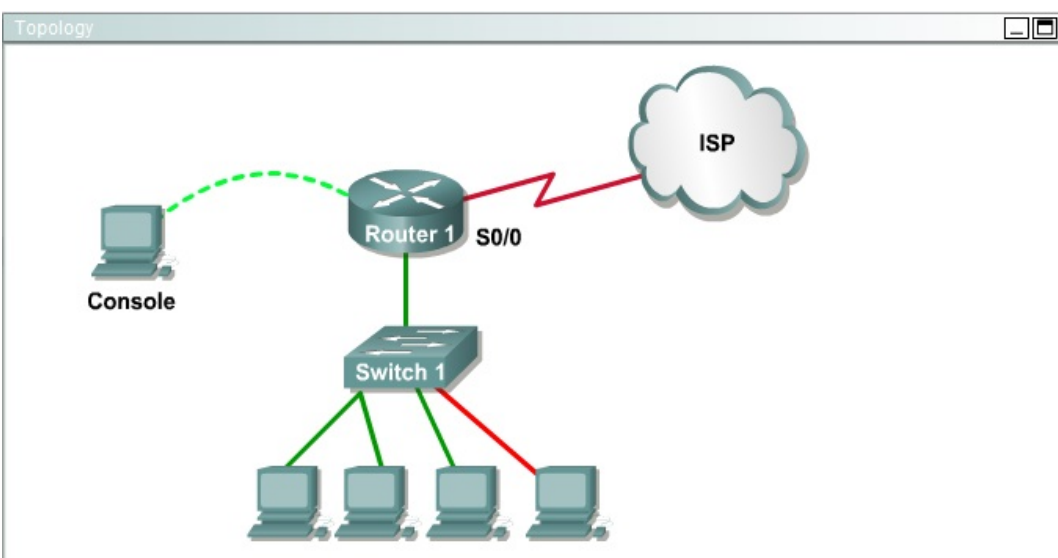
**Scenario**

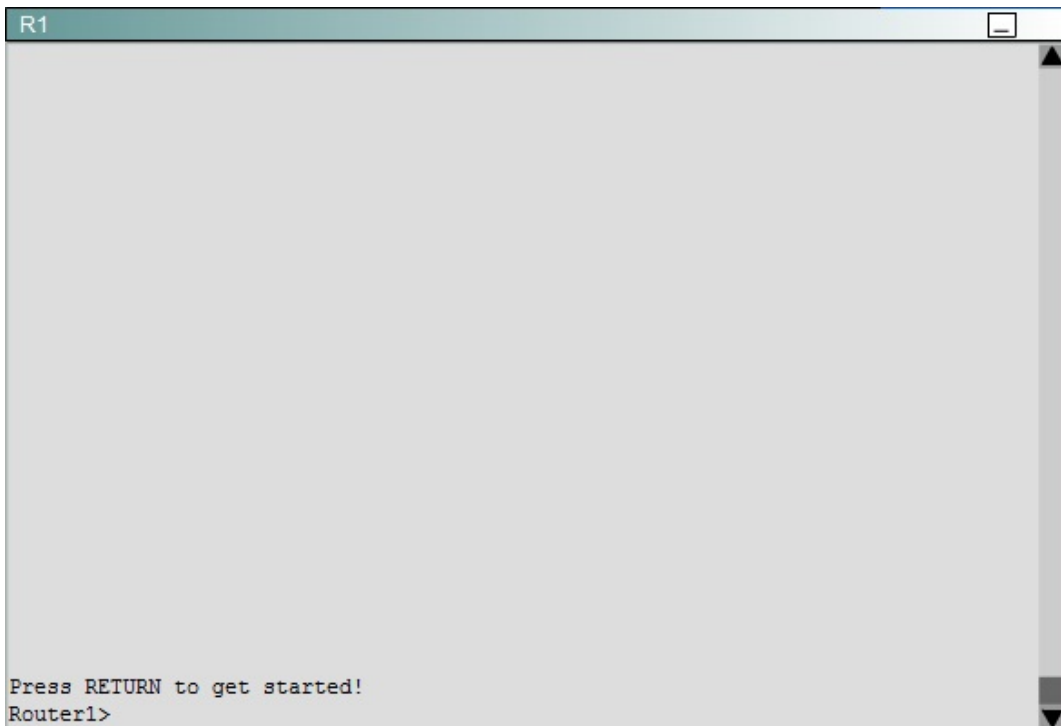
This task requires the use of various **show** commands from the CLI of Router1 to answer four multiple-choice questions. This task does **not** require any configuration.

**NOTE:** The show running-configuration and the show startup-configuration commands have been disabled in this simulation.

To access the multiple-choice questions, click on the numbered boxes on the right of the top panel.

There are 4 multiple-choice questions with this task. Be sure to answer all 4 questions before leaving this item.





What is the bandwidth on the WAN interface of Router 1?

- A. 16 Kbit/sec
- B. 32 Kbit/sec
- C. 64 Kbit/sec
- D. 128 Kbit/sec
- E. 512 Kbit/sec
- F. 1544 Kbit/sec

**Answer: A**

**Explanation:** Explanation/Reference:

Use the "show interface s0/0" to see the bandwidth set at 16 Kbit/sec.

The show interface s0/0 command results will look something like this and the bandwidth will be represented by the "BW" on the fourth line as seen below where BW equals 1544 Kbits/sec.

```
R2#show interface serial 0/0
```

```
Serial0/0 is up, line protocol is down
```

```
Hardware is GT96K Serial
```

```
Internet address is 10.1.1.5/30
```

```
MTU 1500 bytes, BW 1544 Kbit/sec, DLY 20000 uses.
```