ALGONQUIN COLLEGE
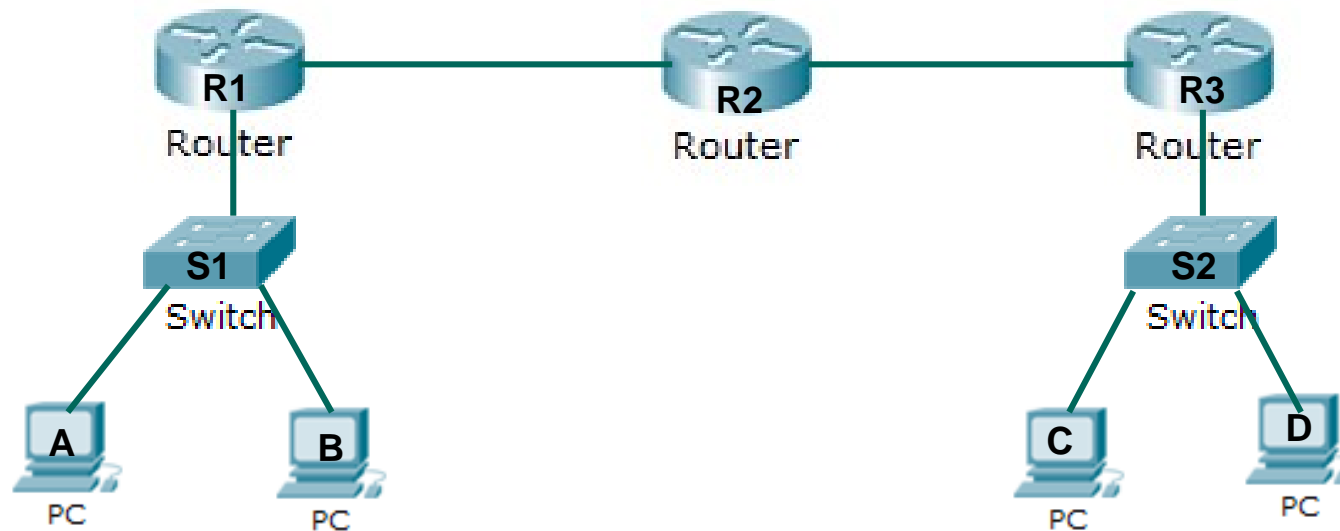
WEEK 9 REVIEW
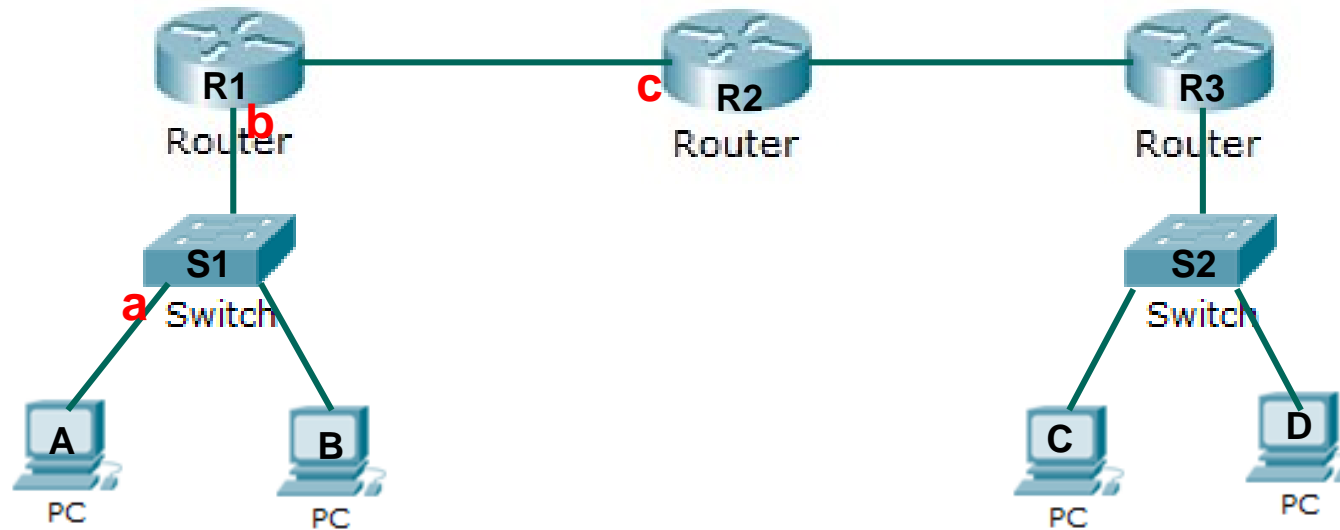
1. A packet is sent from PC-A to PC-D. How many Ethernet encapsulations are required?

A) 4
B) 5
C) 6
D) 7

Answer in last slide

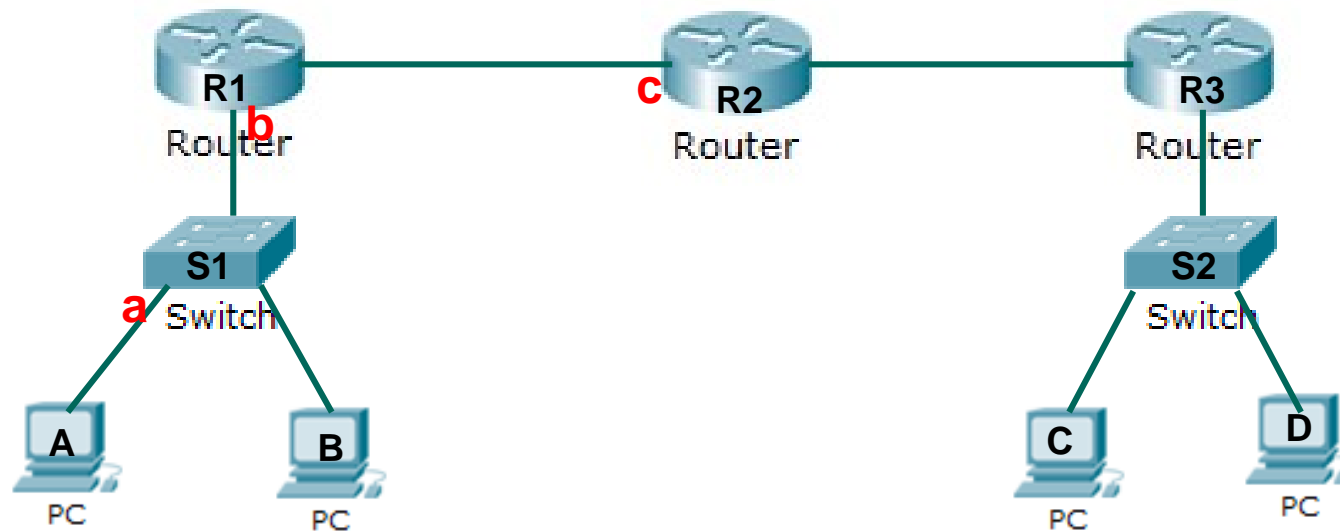ALGONQUIN COLLEGE

2. A packet is sent from PC-A to PC-B. Which gateway does PC-A use?

A) Interface c
B) Interface a
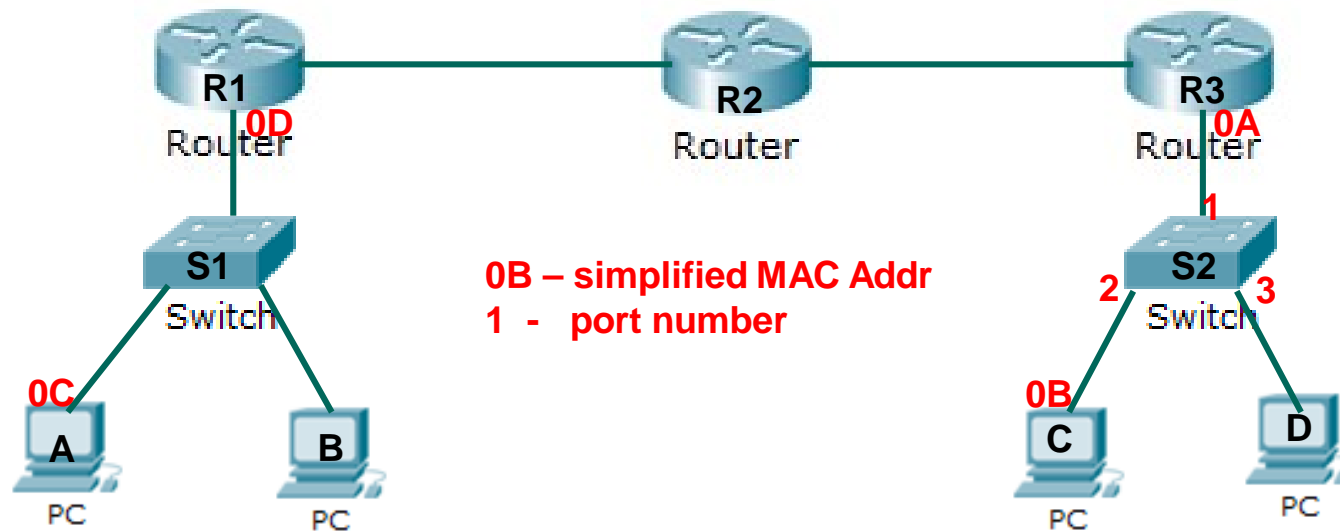C) Interface b
D) none

Answer in last slide

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3. A packet is sent from PC-A to PC-C.   Which gateway does PC-A use?

A) Interface c
B) Interface a
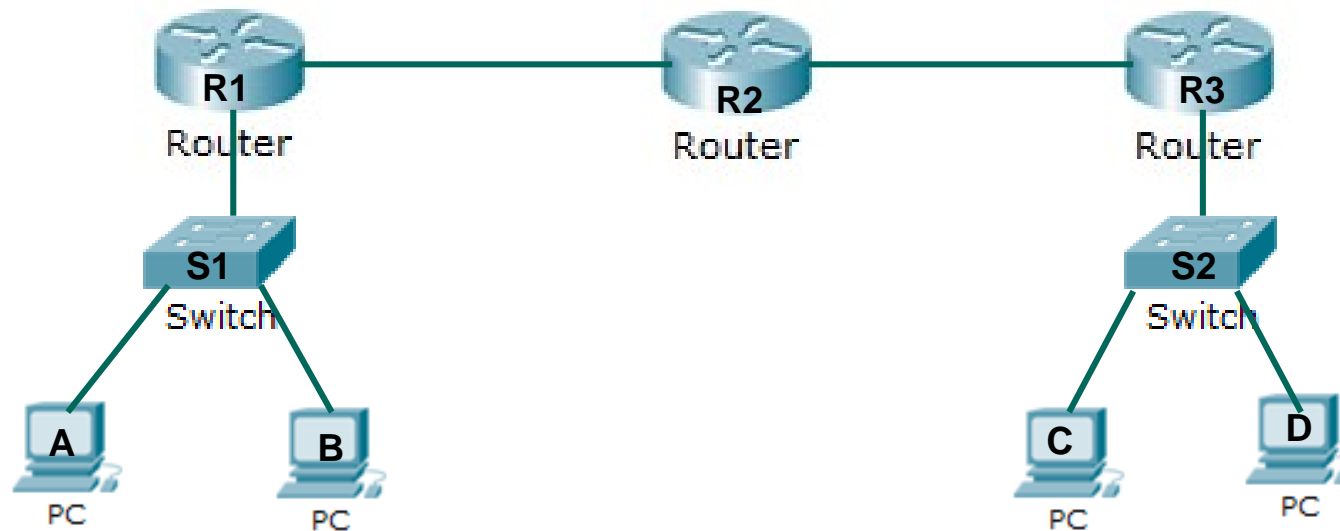C) Interface b
D) none

Answer in last slide

4. The MAC Address Tables of the Switches are empty. A packet is sent from PC-A to PC-C. Which MAC address table information is now populated in S2?

A) 0A, port 1
B) 0C, port 1
C) 0B, port 2
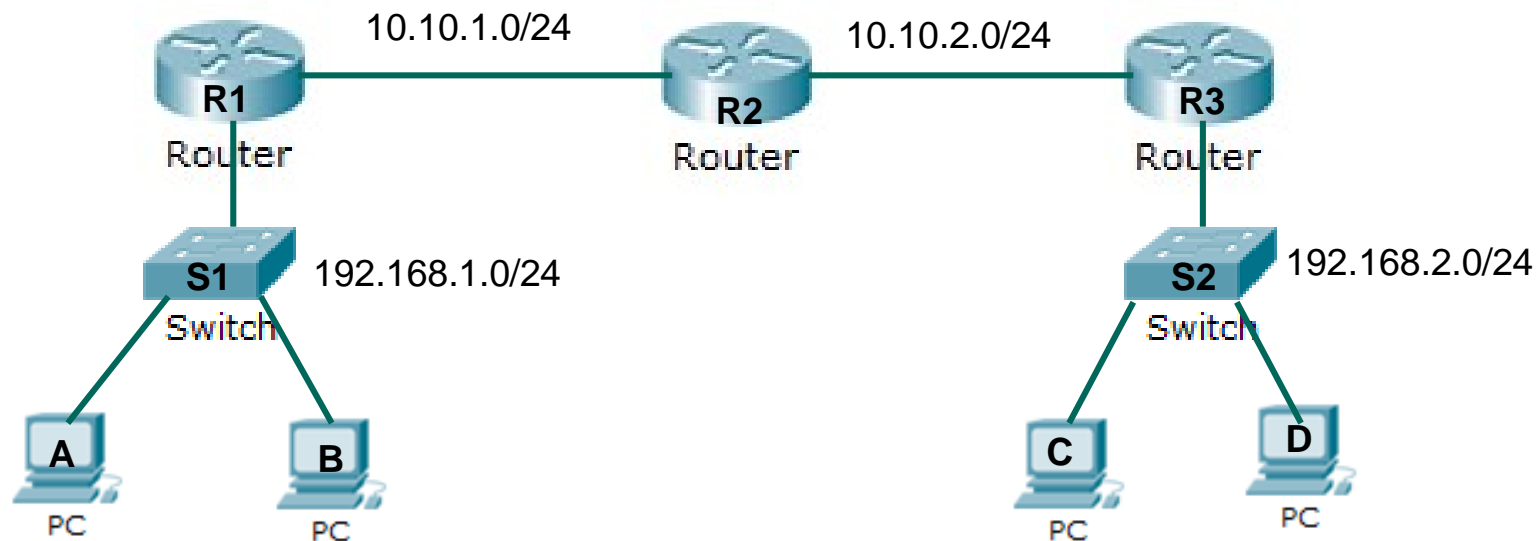D) 0D, port 1

Answer in last slide

5. A packet needs to be sent from PC-A to PC-C.   Which Routers require a static route?

A) R1, R3
B) R1, R2
C) R1, R2, R3
D) R2, R3

Answer in last slide

6. The network is configured with the subnet addresses shown. Which IP address is valid for the S1 port?

A) 192.168.1.255

B) 192.168.1.0

C) 192.168.1.25

D) none of the above

Answer in last slide
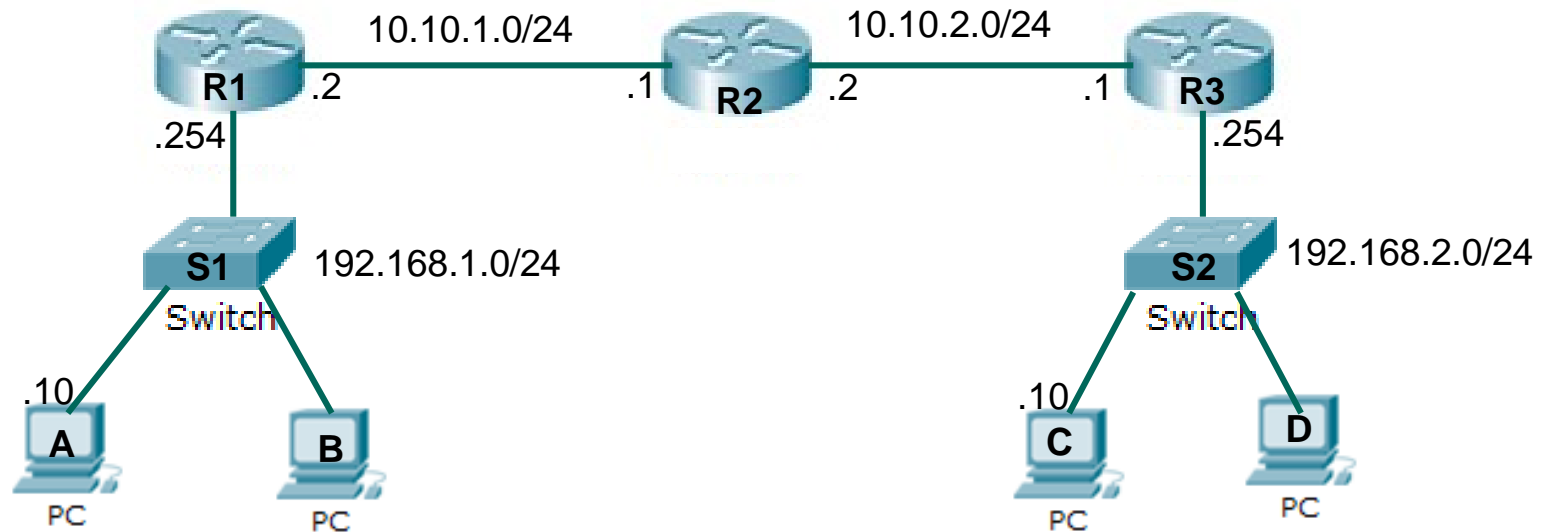
7. A packet needs to be sent from PC-A to PC-C.   Which static route needs to be configured at R1?

A) 192.168.2.0/24; 10.10.1.2

B) 192.168.1.0/24; 10.10.1.1   Static Route = Dest Network;   Next Hop Address

C) 192.168.2.0/24; 10.10.1.1

D) 192.168.2.0/24; 10.10.2.2

Answer in last slide

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10.10.1.0/24   10.10.2.0/24

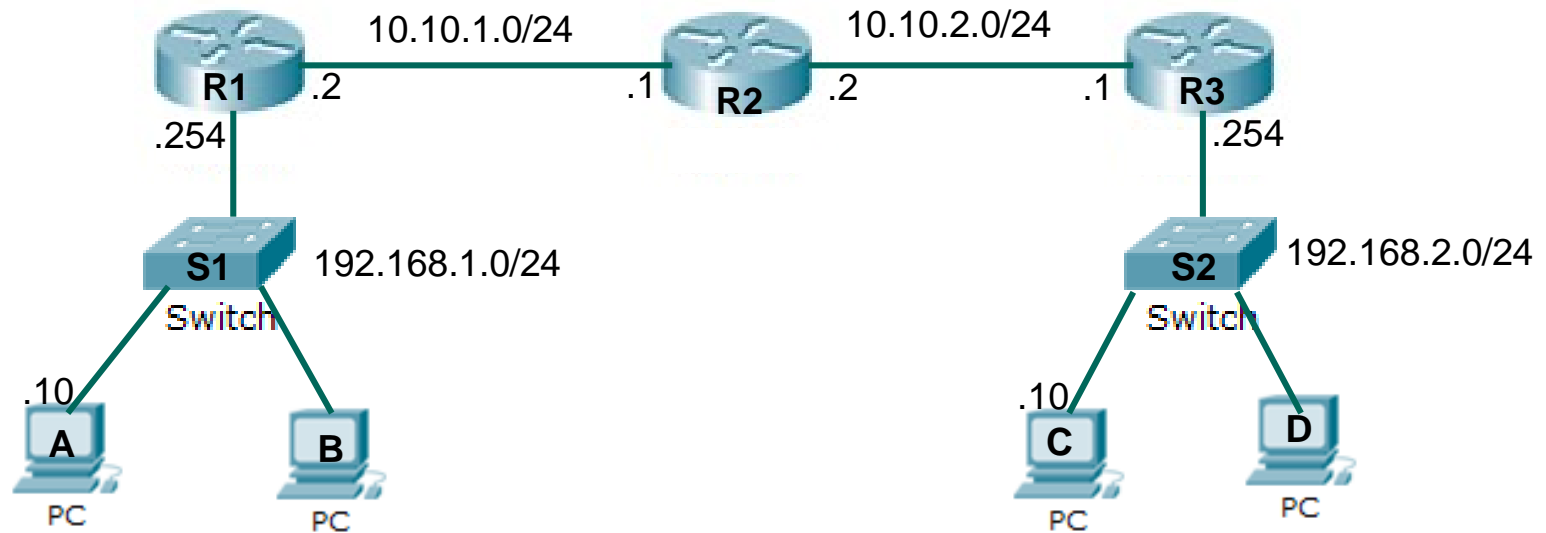R1 .2   .1 R2 .2   .1 R3

.254   .254

S1 192.168.1.0/24   S2 192.168.2.0/24

Switch   Switch

.10   .10

A   B   C   D

PC   PC   PC   PC
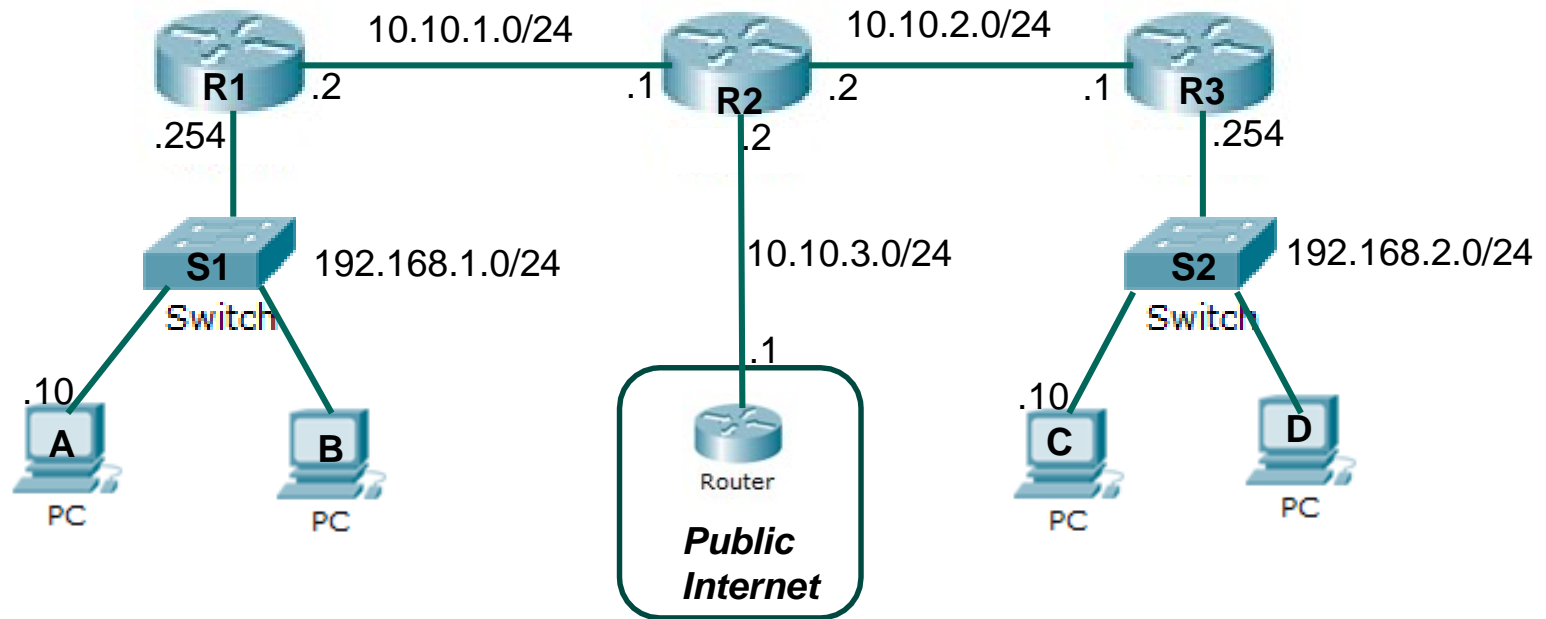
8. What default gateway should be configured at PC-A?

A) none
B) 192.168.1.254
C) 192.168.2.254
D) 10.10.1.2

Answer in last slide

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10.10.1.0/24 10.10.2.0/24

R1 .2   .1 **R2** .2   .1 **R3**
.254   .2   .254

S1 192.168.1.0/24   10.10.3.0/24   **S2** 192.168.2.0/24
Switch   .1   Switch

.10   .10
A   **B**   Router   **C**   **D**
PC   PC   **Public Internet**   PC   PC
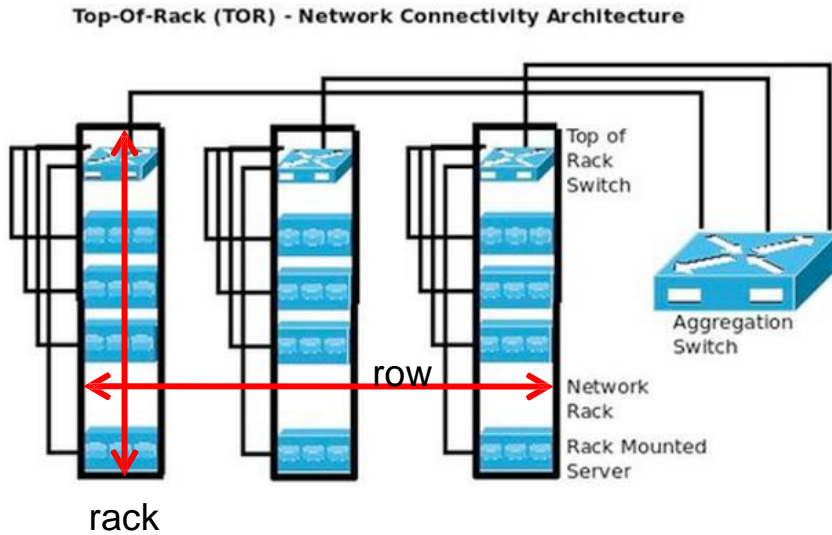
9. A default route is configured at R3?   Which one is the most logical to use.

A) 10.10.2.2

B) 10.10.3.1
C) 192.168.2.254
D) Default routes are only configured on end devices

Answer in last slide

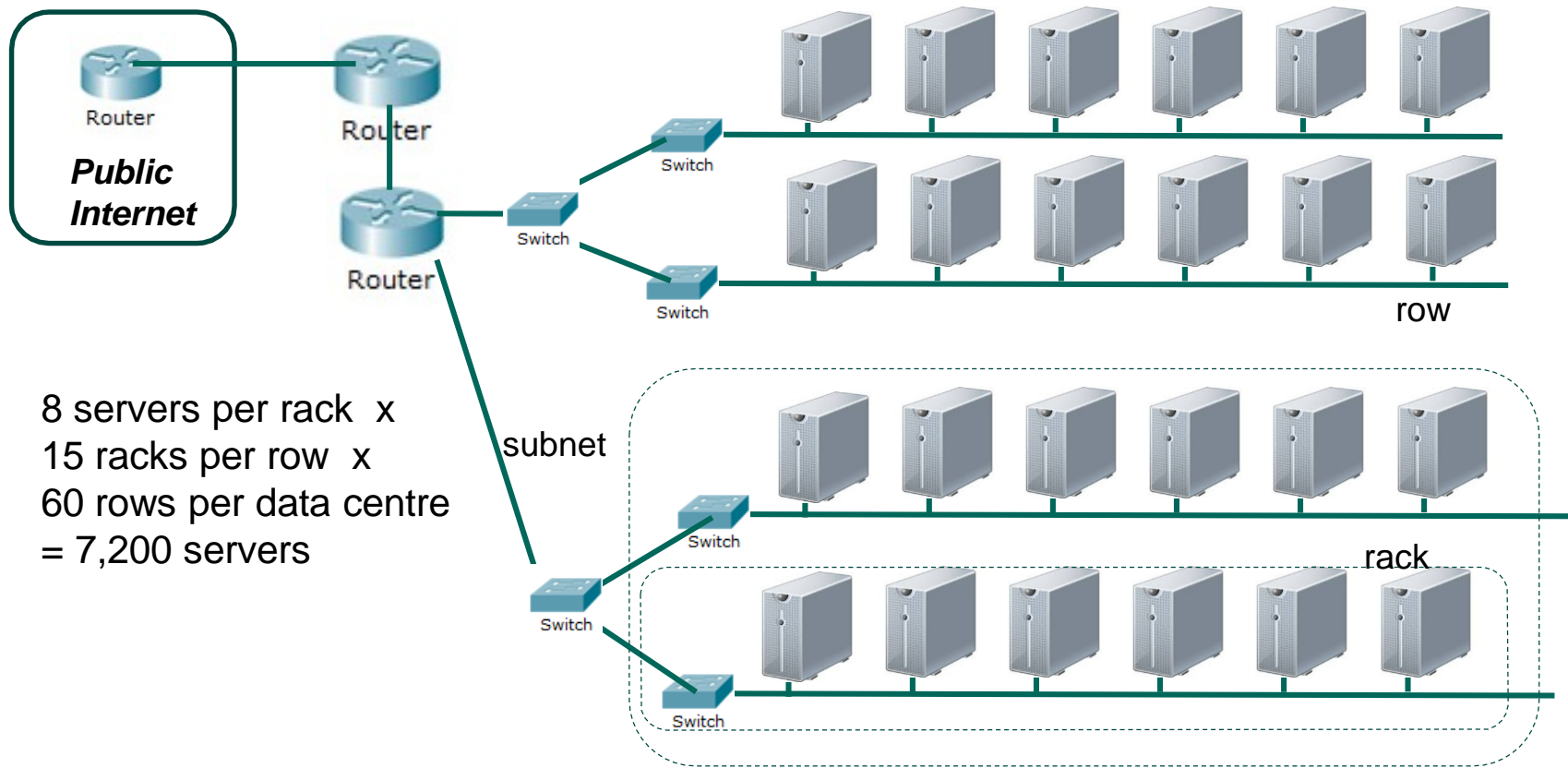ALGONQUIN
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Data Centre Design
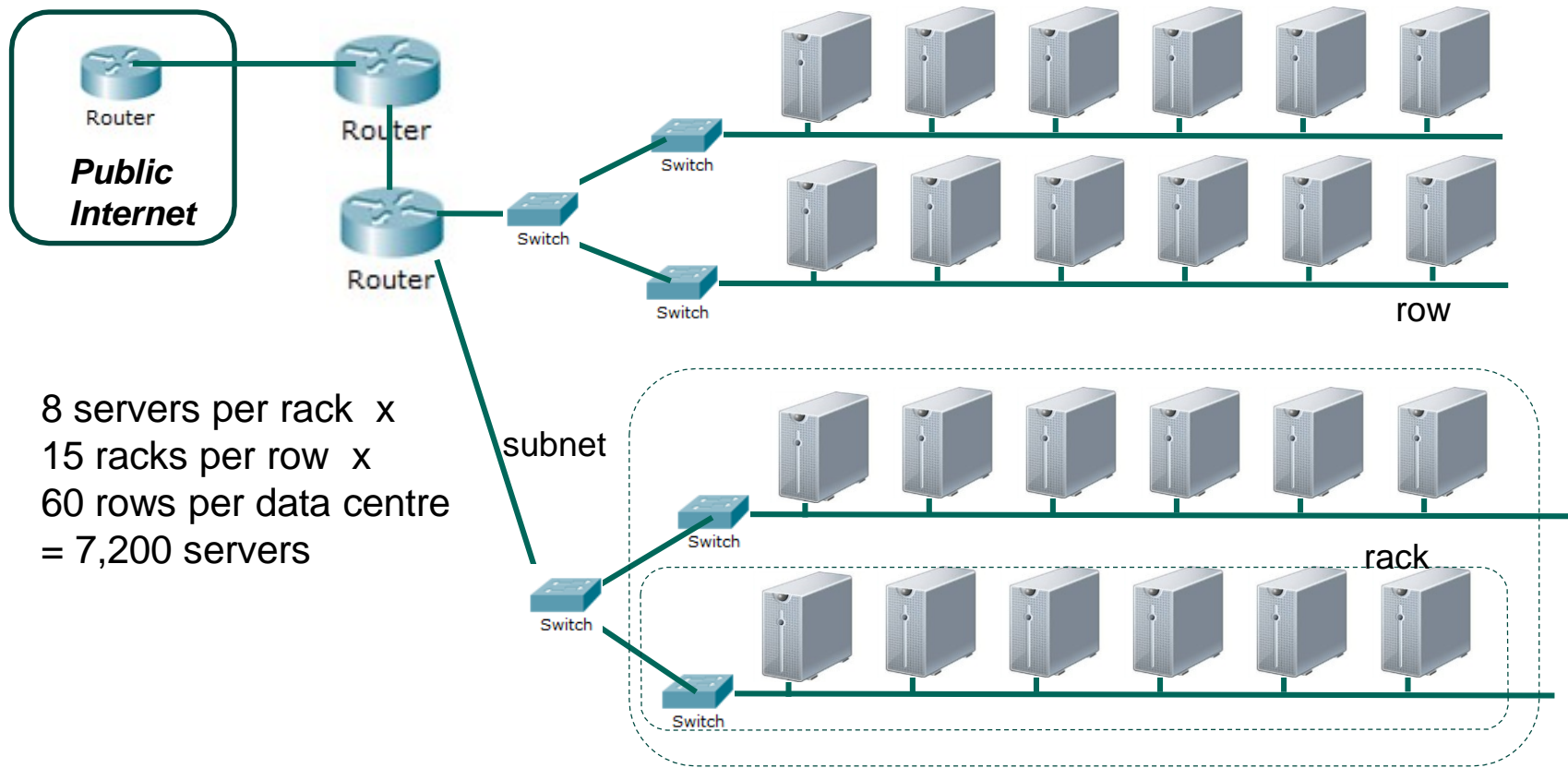

Number of Servers = servers per rack x   racks per row x rows per DC

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Public Internet

Router

Router

Router

Switch

Switch

Switch

row

8 servers per rack x
15 racks per row x
60 rows per data centre
= 7,200 servers

subnet

Switch

Switch

Switch

rack

10. The data centre has been assigned the address 172.20.192.0/19. The full address space must be used. Each row is assigned its own subnet. What is the row subnet?

A) 172.20.192.0/24
B) 172.20.192.0/26
C) 172.20.192.0/25
D) 172.20.192.0/27

Answer in last slide

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Public Internet

Router

Router

Router

Switch

Switch

Switch

Switch

row

subnet

rack

8 servers per rack x
15 racks per row x
60 rows per data centre
= 7,200 servers

11. If row n is assigned subnet n, what is the subnet 3 address?

A) 172.20.195.0/25
B) 172.20.192.123/25
C) 172.20.193.128/25
D) 172.20.192.224/25

Answer in last slide

12. If the third row subnet is 172.120.193.128/25, what are the first and last host addresses?

A) 172.20.193.129/25 & 172.20.193.255/25

B) 172.20.193.129/25 & 172.20.193.240/25

C) 172.20.193.129/25 & 172.20.194.0/25

D) 172.20.193.129/25 & 172.20.193.254/25

Answer in last slide

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Answers

1   A
2   D
3   C
4   A
5   B
6   D
7   C
8   B
9   A
10 C
11 C
12 D