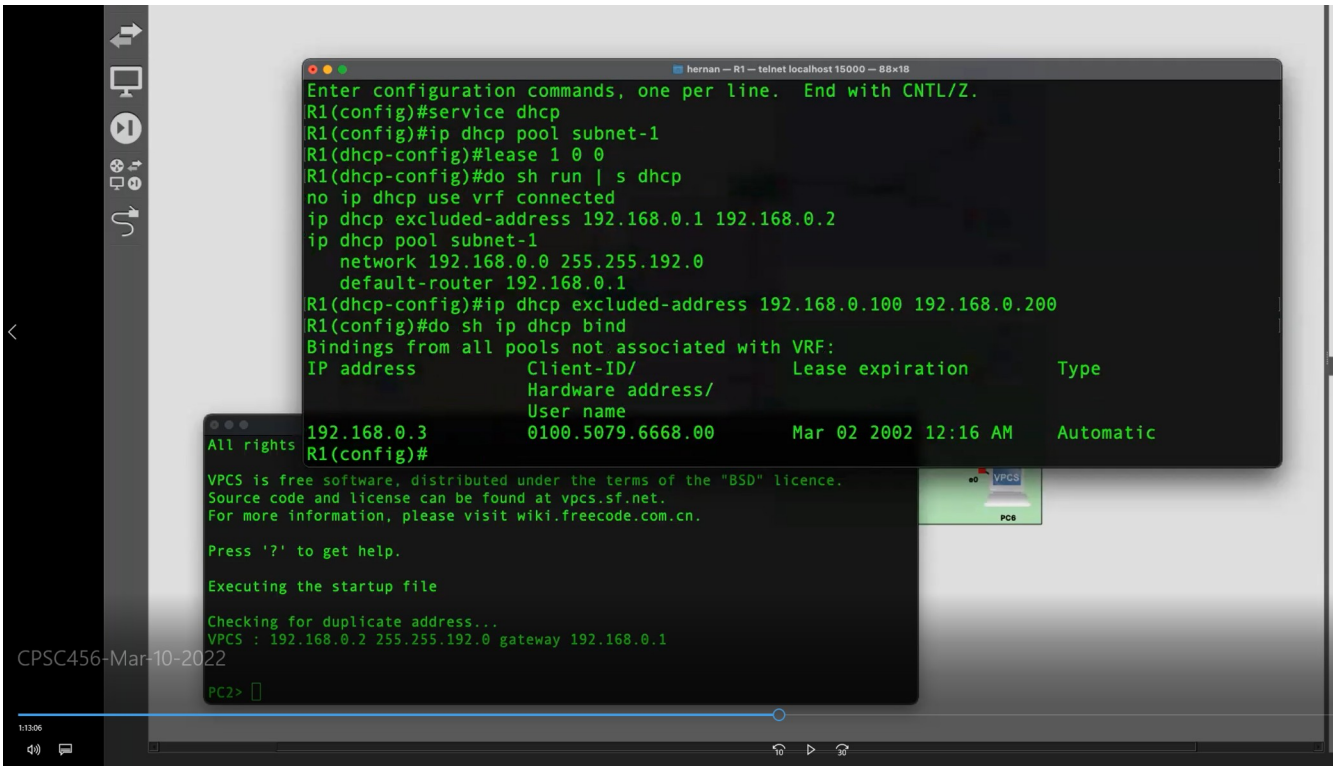
Display the current static routing table in global config mode.

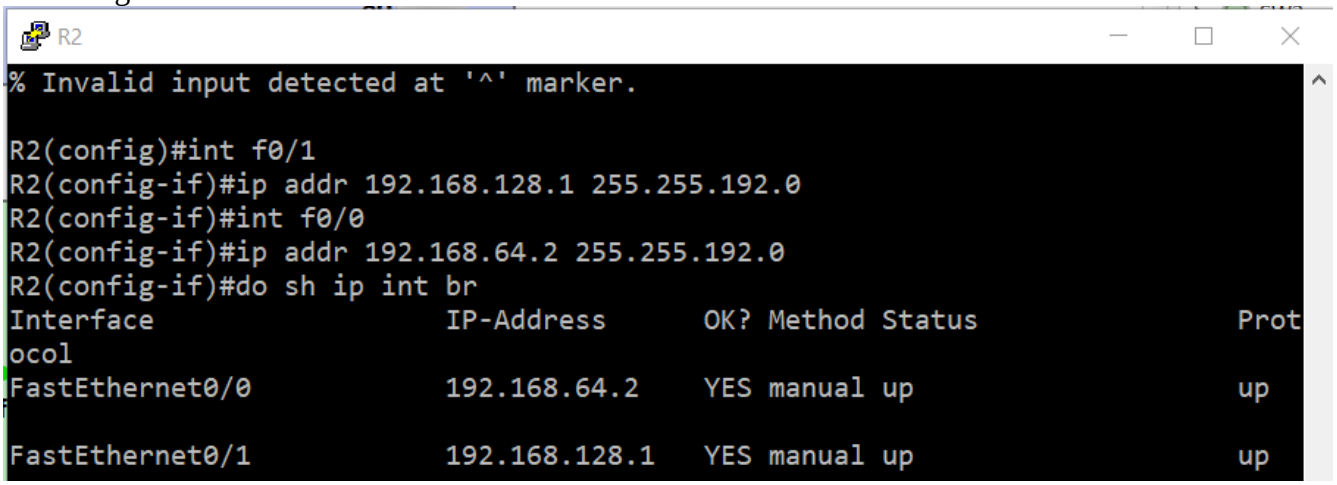
R1#~~do~~ **sh ip route static**

Verify that the appropriate next hop address in the static routing table as entered.

```
R1#sh ip route static
S       192.168.192.0/18 [1/0] via 192.168.64.3
S       192.168.128.0/18 [1/0] via 192.168.64.2
R1#
```



R2 configuration:



add the static route destined for subnet #1

```
ip route 192.168.0.0 255.255.192.0 192.168.64.1
```

Add the static route destined for 192.168.128.0/18 (subnet #4).
R1(config)#`ip route 192.168.192.0 255.255.192.0 192.168.64.3`

```
R2(config)#ip route 192.168.0.0 255.255.192.0 192.168.64.1
R2(config)#ip route 192.168.192.0 255.255.192.0 192.168.64.3
R2(config)#do sh ip route static
S    192.168.192.0/18 [1/0] via 192.168.64.3
S    192.168.0.0/18 [1/0] via 192.168.64.1
```

Enable DHCP service
`R1(config)#`**`service dhcp`**

Create a DHCP pool named subnet-3

R1(config)#`ip dhcp pool subnet-3`

Assign the subnet #3 address to the DHCP pool.
R1(dhcp-config)#`network 192.168.128.0 255.255.192.0`

Set the lease time to 1 day. lease format: *<days> <hours> <minutes>*
`R1(dhcp-config)#`**`lease 1 0 0`**

Set the designated default gateway.
`R1(dhcp-config)#`**`default-router 192.168.128.1`**

Note: The DHCPOFFER message sent to the client by the DHCP server will include both of the lease time and gateway address along with the available IPv4 address.

Exclude the host address range that were already assigned (f0/1 and PC4?) through static assignments. It can be used with a single address or range using two IP addresses. Use the help (?) command to better understand this command.
R1(dhcp-config)#`ip dhcp excluded-address 192.168.128.1 192.168.128.4`

Save the running-config to startup-config under the global configuration mode.
`R1(config)#`**`do wr`**

Display DHCP leases, if any, in the global config mode. It should be empty. Let PC1 successfully lease an IP address from the DHCP server (R1), then run it again. Note that it is okay if the address is different as labeled in the diagram.
R1(config)#`do sh ip dhcp bind`

video progress at 1:21:46

Router R3 configuration

Enter the global config mode.

```
R1#conf t
```

Set the designated host address for the R3 f0/1 interface and enable it.

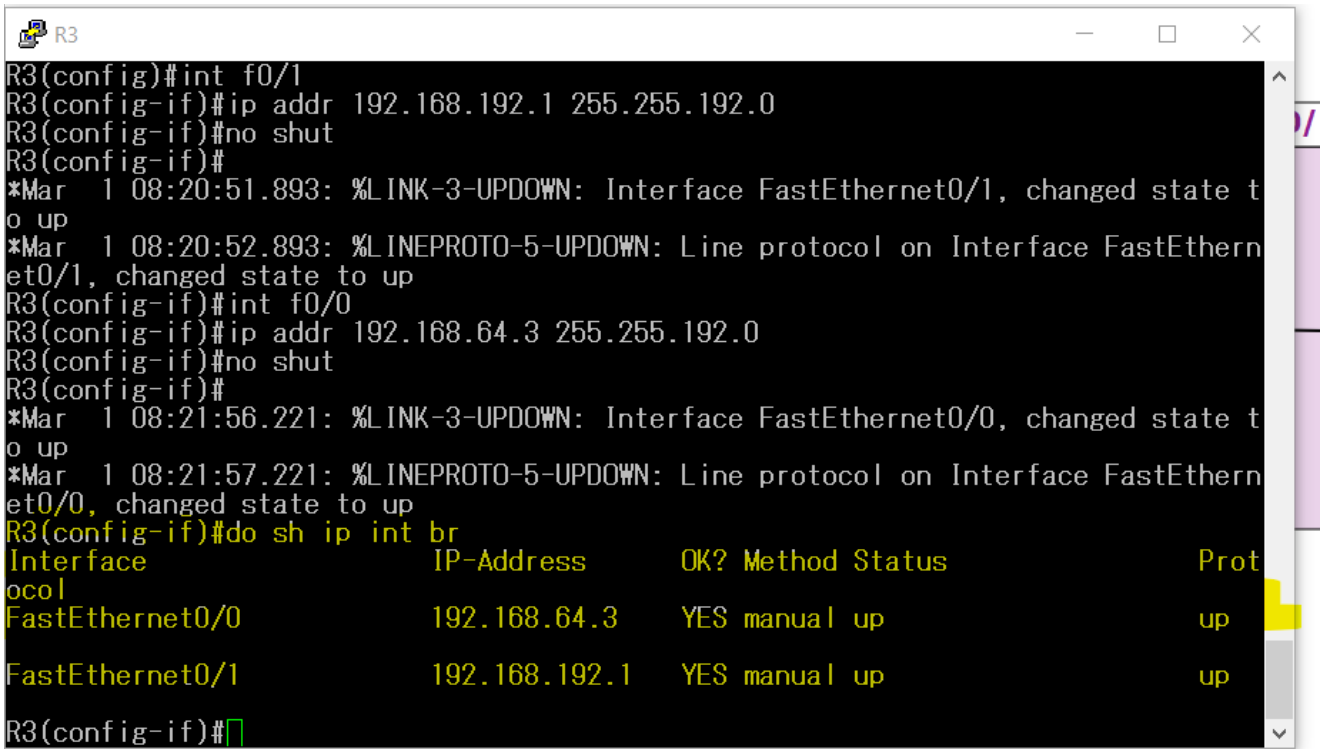
```
R1(config)#int f0/1
R1(config-if)#ip addr 192.168.192.1 255.255.192.0
R1(config-if)#no shut
```

Set the designated host address for the R3 f0/0 interface and enable it.

```
R1(config)#int f0/0
R1(config-if)#ip addr 192.168.64.3 255.255.192.0
R1(config-if)#no shut
```

Display the router's brief summary interface to verify the IP address assignments and both interfaces are enabled.

```
R1(config-if)#do sh ip int br
```



Return to the Privilege EXEC mode.

```
R1(config-if)#end
```

Save the current running-config to the startup-config in the Privilege EXEC mode.
R1#**wr**

Router R3 - Static Routing

Static route format: <destination_subnet> <destination_subnet_mask> <next_hop_address>

Display the current static routing table in Privilege EXEC mode. It should be empty at this point.
R1#**sh ip route static**

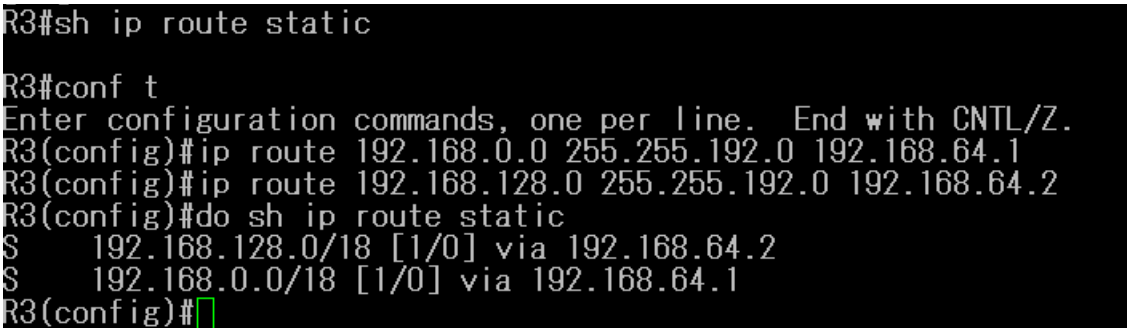
Enter the global configuration mode.
R1#**conf t**

add the static route destined for subnet #1

```
ip route 192.168.0.0 255.255.192.0 192.168.64.1
```

Add the static route destined for 192.168.128.0/18 (subnet #3).
R1(config)#`ip route 192.168.128.0 255.255.192.0 192.168.64.2`

Display the current static routing table in global config mode.
R1(config-if)#`do sh ip route static`



Verify that the appropriate next hop address in the static routing table as entered.

Return to the global config mode.
R1(config-if)#**exit**

Router R3 - DHCP Service

Enable DHCP service
R1(config)#**service dhcp**

Create a DHCP pool named subnet-4.

```
R1(config)#ip dhcp pool subnet-4
```

Assign the subnet #4 address to the DHCP pool.

```
R1(dhcp-config)#network 192.168.192.0 255.255.192.0
```

Set the lease time to 1 day. lease format: <*days*> <*hours*> <*minutes*>

```
R1(dhcp-config)#lease 1 0 0
```

Set the designated default gateway.

```
R1(dhcp-config)#default-router 192.168.192.1
```

Note: The DHCPOFFER message sent to the client by the DHCP server will include both of the lease time and gateway address along with the available IPv4 address.

Exclude the host address range that were already assigned (f0/1 and PC6?) through static assignments. It can be used with a single address or range using two IP addresses. Use the help (?) command to better understand this command.

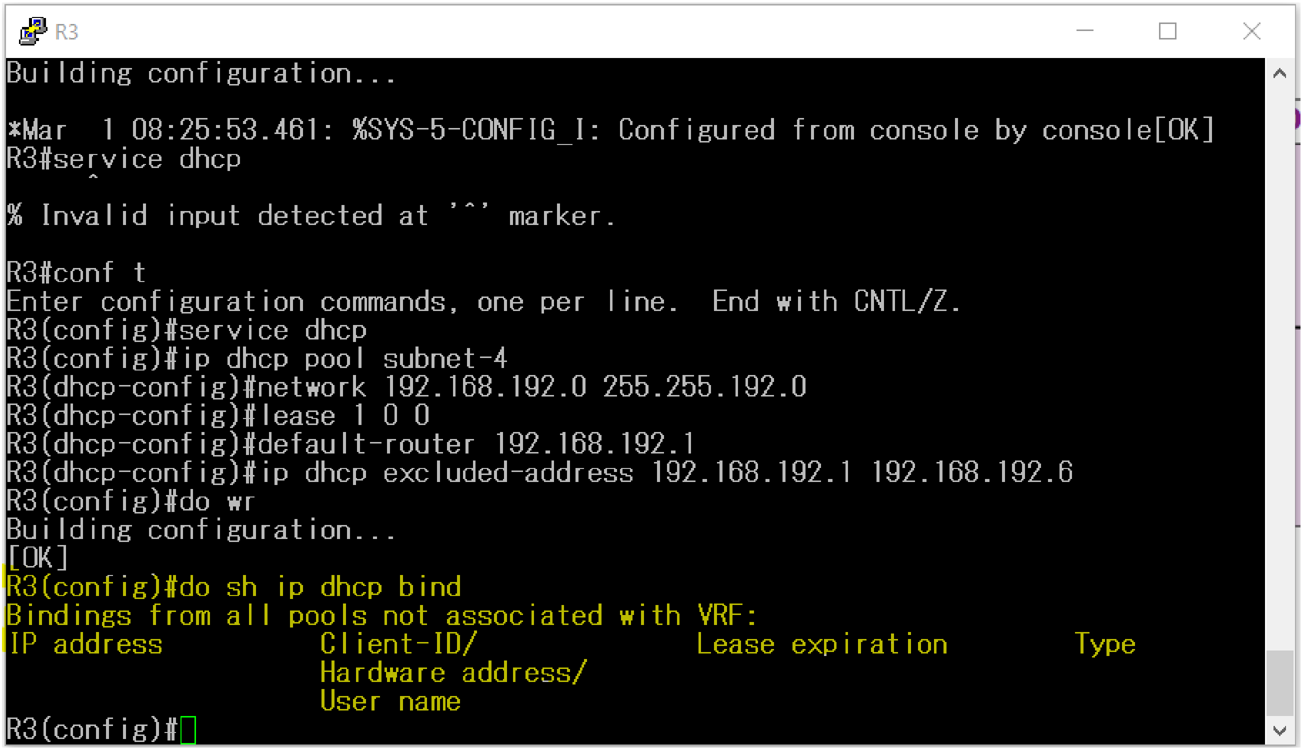
```
R1(dhcp-config)#ip dhcp excluded-address 192.168.192.1 192.168.192.6
```

Save the running-config to startup-config under the global configuration mode.

```
R1(config)#do wr
```

Display DHCP leases, if any, in the global config mode. It should be empty. Let PC5? successfully lease an IP address from the DHCP server (R3), then run it again. Note that it is okay if the address is different as labeled in the diagram.

```
R1(config)#do sh ip dhcp bind
```



boundary of organization: so I can find this top half of the document easily!

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Part 2: The actual tryhackme questions:

What is the original subnet where all 4 subnets are derived?

192.168.0.0/16 — Correct Answer

done see the reverse subnets document for more info

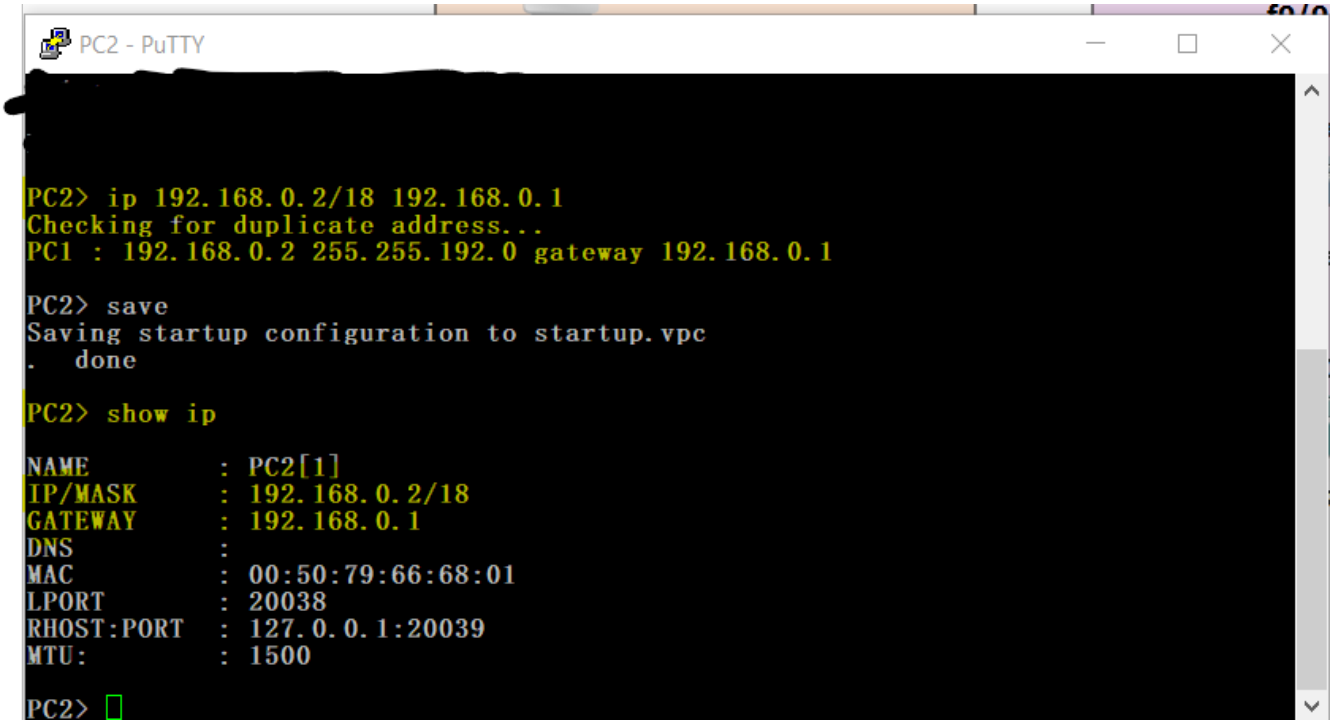
Configure the hosts below with manual IPv4 addresses based on the given network topology using the following format "ip <*host_address*>/<*cidr_netmask* > <*gateway_address*>"

PC2: ip 192.168.0.2/18 192.168.0.1

Configure the hosts below with manual IPv4 addresses based on the given network topology using the following format "ip <*host_address*>/<*cidr_netmask* > <*gateway_address*>"

PC2: ip 192.168.0.2/18 192.168.0.1

No answer needed — Completed



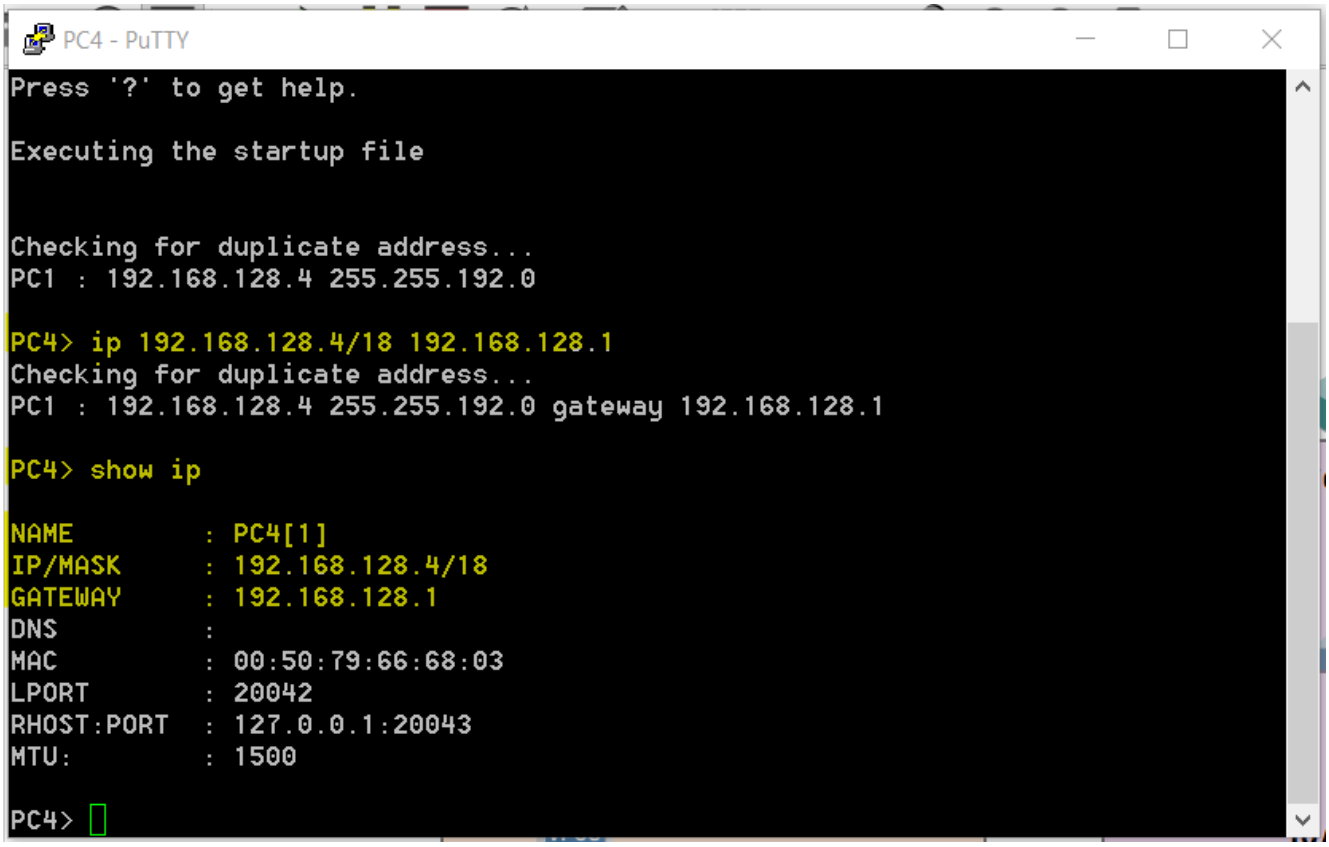
PC4: _____

PC4: _____

Answer format: ** ***.***.***.*/** ***.***.***.* | Submit

"ip <host_address>/<cidr_netmask > <gateway_address>"

host_address = 192.168.128.4
cidr_netmask = 18
gateway_address = 192.168.128.1
PC4: ip 192.168.128.4/18 192.168.128.1



next

PC4: _____

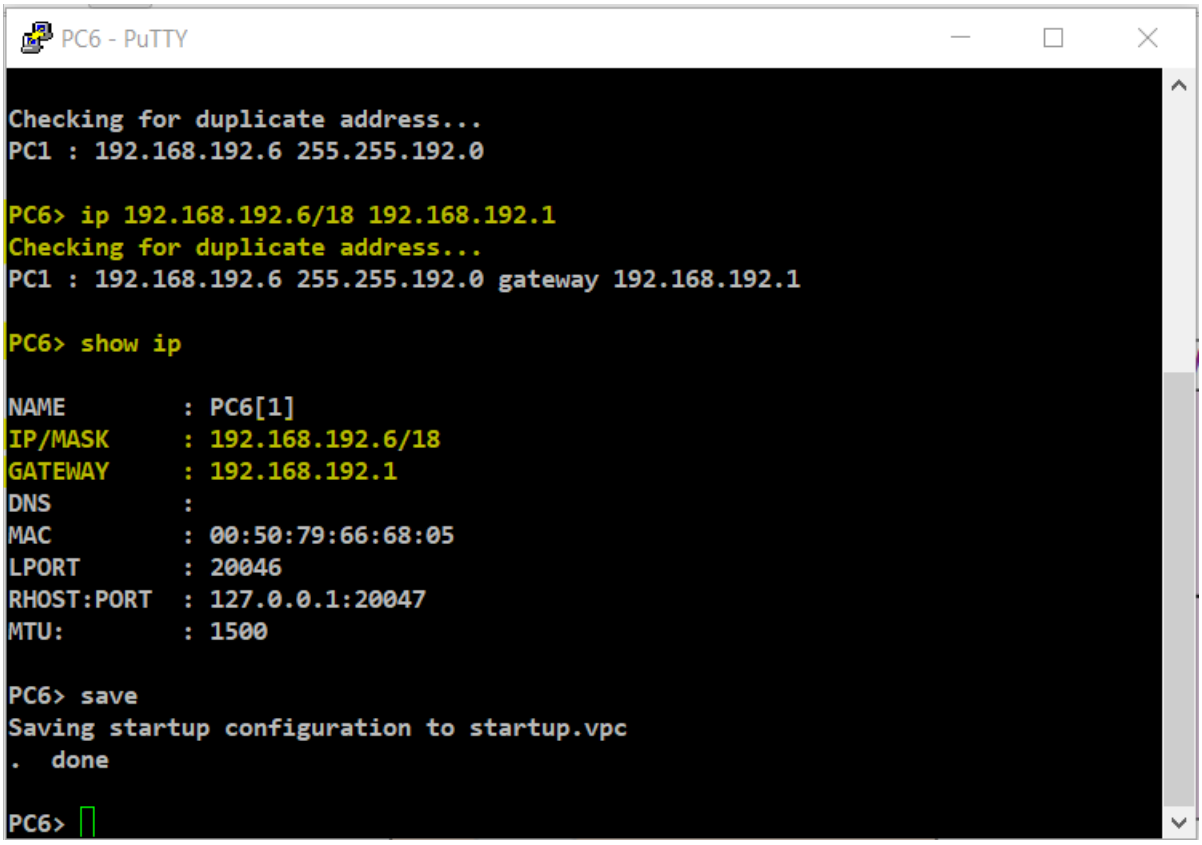
ip 192.168.128.4/18 192.168.128.1 | Correct Answer

PC6: _____

Answer format: ** ***.***.***.*/** ***.***.***.* | Submit

PC6: _____

Configure the hosts below with manual IPv4 addresses based on the given network topology using the following format "ip *<host_address>/<cidr_netmask> <gateway_address>*"
host_address = 192.168.192.6
cidr_netmask = /18
gateway_address = 192.168.192.1
PC6: ip 192.168.192.6/18 192.168.192.1



next

Configure the router interfaces as assigned in the diagram.

Refer to the Router R1 - Interface Configurations in the description section.

No answer needed | Correct Answer

Router R2 - Interface Configurations

R2#conf t
R2(config)#int f0/1

Enter the assigned static IPv4 address of R2 f0/1.
R2(config-if)# _____

Answer format: ** **** ***.***.***.* ***.***.***.*

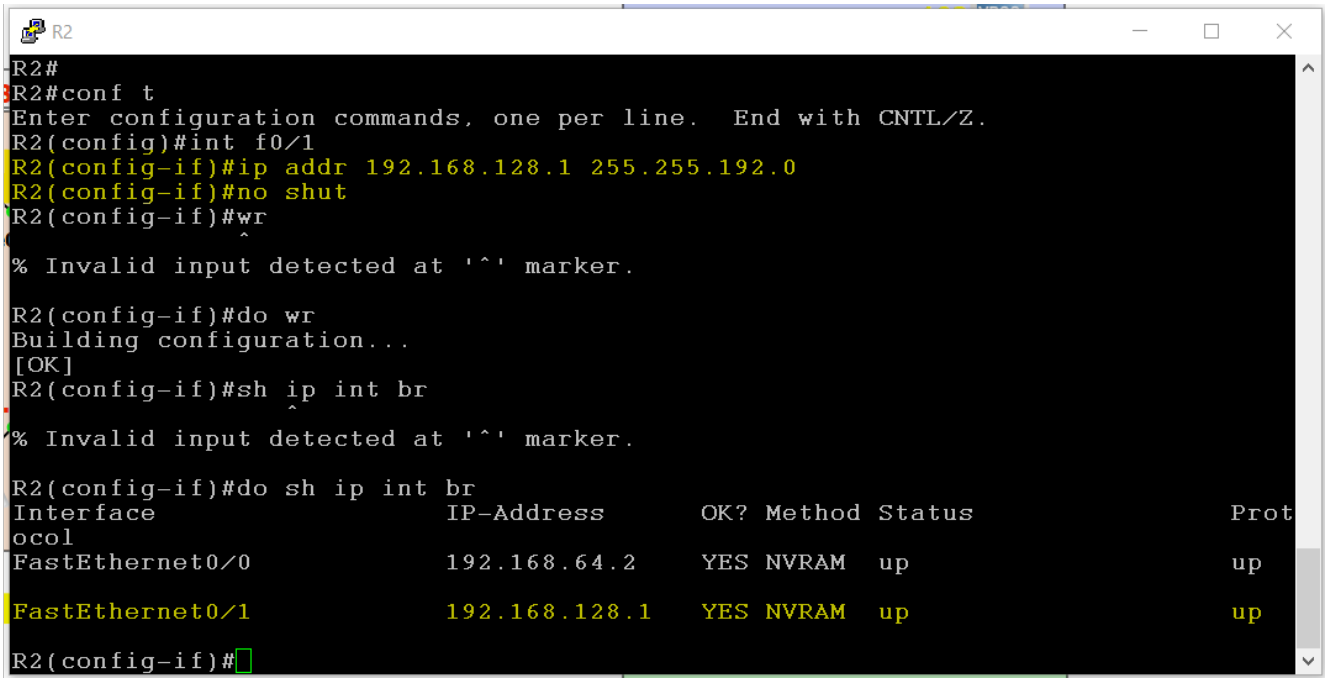
Submit

Router R2 - Interface Configurations

```
R2#conf t
R2(config)#int f0/1

Enter the assigned static IPv4 address of R2 f0/1.
R2(config-if)# _____
```

example:
Set the designated host address for the R1 f0/1 interface and enable it.

```
R1(config)#int f0/1
R1(config-if)#ip addr 192.168.0.1 255.255.192.0
R1(config-if)#no shut

R2(config-if)# ip addr 192.168.128.1 255.255.192.0
R2(config-if)#no shut
```


R2
R2#
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#int f0/1
R2(config-if)#ip addr 192.168.128.1 255.255.192.0
R2(config-if)#no shut
R2(config-if)#wr
               ^
% Invalid input detected at '^' marker.
R2(config-if)#do wr
Building configuration...
[OK]
R2(config-if)#sh ip int br
               ^
% Invalid input detected at '^' marker.
R2(config-if)#do sh ip int br
Interface   IP-Address   OK? Method Status   Prot
ocol
FastEthernet0/0   192.168.64.2   YES NVRAM up   up
FastEthernet0/1   192.168.128.1   YES NVRAM up   up
R2(config-if)#

next

Enter the assigned static IPv4 address of R2 f0/1.
R2(config-if)# _____

ip addr 192.168.128.1 255.255.192.0 — Correct Answer

Enable the R2 f0/1 interface.
R2(config-if)# _____

no shut — Correct Answer

Switch to the router interface f0/0.
R2(config-if)# _____

int f0/0 — Correct Answer

Enter the assigned static IPv4 address of R2 f0/0.
R2(config-if)# _____

Enable the R2 f0/0 interface.
R2(config-if)#**no shut**

Answer format: ** **** ***.***.**.* ***.***.***.* — Submit

Return to the Privilege EXEC mode.
R2(config-if)#**end**

Display a brief summary of the interfaces' IP addresses.
R2# _____

Save the running-config to startup-config in Privilege EXEC mode.
R2#**wr**

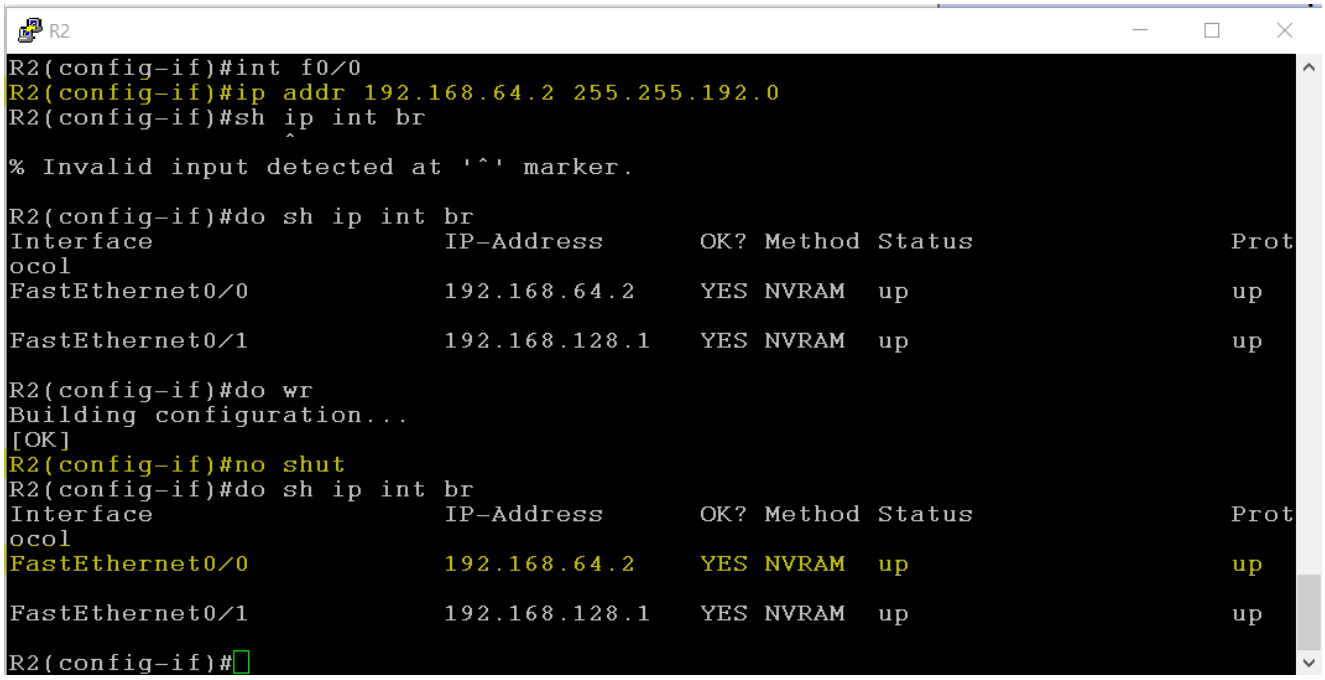
Answer format: ** ** *** ** — Submit

```
Enter the assigned static IPv4 address of R2 f0/0.
R2(config-if)# _____

Enable the R2 f0/0 interface.
R2(config-if)#no shut
```

example:

Set the designated host address for the R1 f0/0 interface and enable it.

```
R1(config)#int f0/0
R1(config-if)#ip addr 192.168.64.1 255.255.192.0
R1(config-if)#no shut

R2(config)#int f0/0
R2(config-if)#ip addr 192.168.64.2 255.255.192.0
R2(config-if)#no shut
```


R2
R2(config-if)#int f0/0
R2(config-if)#ip addr 192.168.64.2 255.255.192.0
R2(config-if)#sh ip int br
^
% Invalid input detected at '^' marker.
R2(config-if)#do sh ip int br
Interface IP-Address OK? Method Status Prot
ocol
FastEthernet0/0 192.168.64.2 YES NVRAM up up
FastEthernet0/1 192.168.128.1 YES NVRAM up up
R2(config-if)#do wr
Building configuration...
[OK]
R2(config-if)#no shut
R2(config-if)#do sh ip int br
Interface IP-Address OK? Method Status Prot
ocol
FastEthernet0/0 192.168.64.2 YES NVRAM up up
FastEthernet0/1 192.168.128.1 YES NVRAM up up
R2(config-if)#

next

R2#**conf t**
R2(config)#**int f0/1**

Enter the assigned static IPv4 address of R2 f0/1.
R2(config-if)# _____

ip addr 192.168.128.1 255.255.192.0 — Correct Answer

Enable the R2 f0/1 interface.
R2(config-if)# _____

no shut — Correct Answer

Switch to the router interface f0/0.
R2(config-if)# _____

int f0/0 — Correct Answer

Enter the assigned static IPv4 address of R2 f0/0.
R2(config-if)# _____

Enable the R2 f0/0 interface.
R2(config-if)#**no shut**

ip addr 192.168.64.2 255.255.192.0 — Correct Answer

Return to the Privilege EXEC mode.
R2(config-if)#**end**

Display a brief summary of the interfaces' IP addresses.
R2# _____

Save the running-config to startup-config in Privilege EXEC mode.
R2#**wr**

sh ip int br — Correct Answer

next

Access the router R3 f0/1.

Enter the assigned static IPv4 address for R3 f0/1.
R3(config-if)# _____

Answer format: ** **** ***.***.***.* ***.***.***.* | Submit

Enable the R3 f0/1 interface.
R3(config-if)#_____

Answer format: ** **** | Submit

Access the router R3 f0/0.

Enter the assigned static IPv4 address for R3 f0/0.
R3(config-if)#_____

Answer format: ** **** ***.***.**.* ***.***.***.* | Submit

Enable the R3 f0/1 interface.
R3(config-if)#_____

Answer format: ** **** | Submit

Save the running-config to startup-config while in the interface level config mode.
R3(config-if)#_____

Return to the Privilege EXEC mode.
R3(config-if)#**end**

Answer format: ** ** | Submit

next

Access the router R3 f0/1.

Enter the assigned static IPv4 address for R3 f0/1.
R3(config-if)# _____

example:

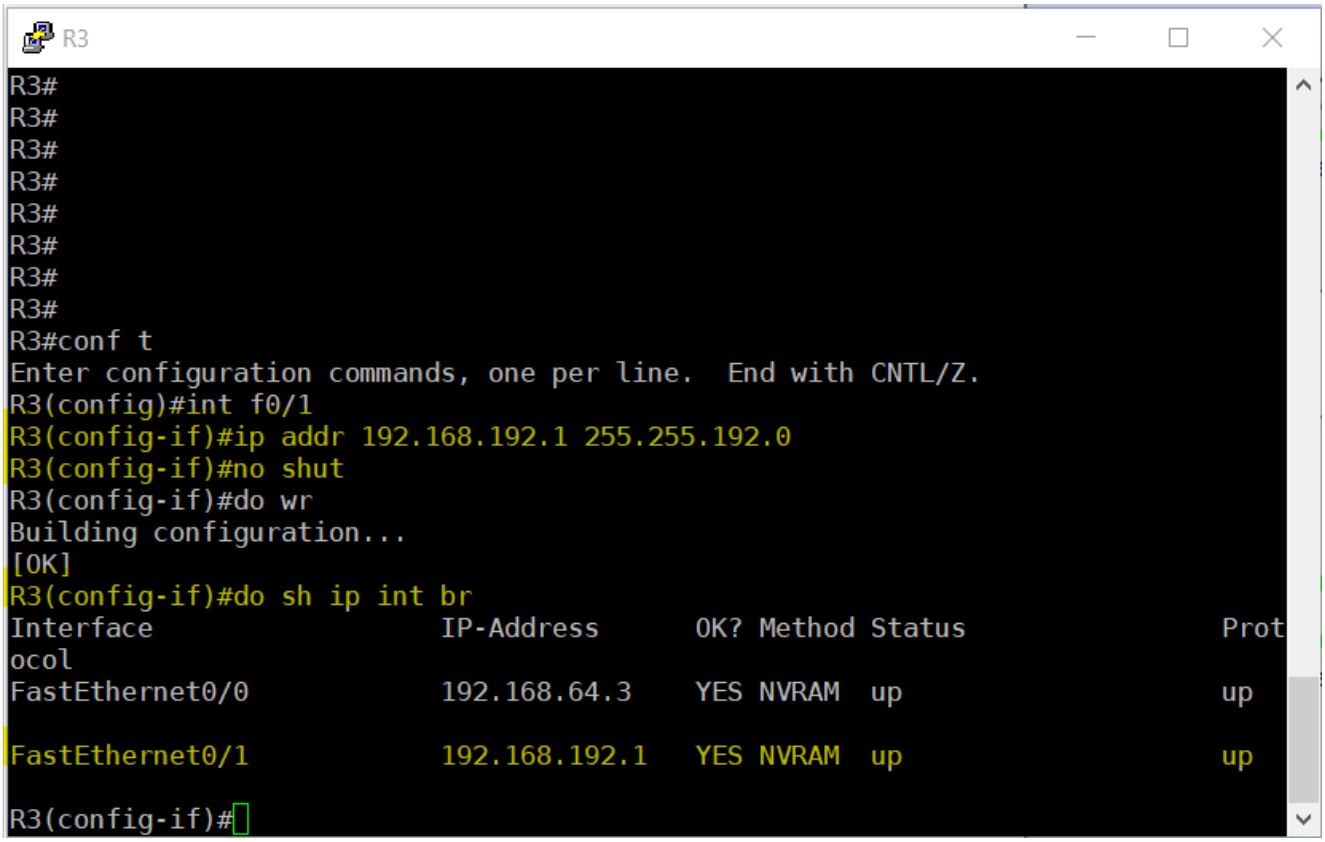
Enter the global config mode.
R1#**conf t**

Set the designated host address for the R1 f0/1 interface and enable it.
R1(config)#**int f0/1**
R1(config-if)#**ip addr 192.168.0.1 255.255.192.0**
R1(config-if)#**no shut**

R3#**conf t**

```
R3(config)#int f0/1
R3(config-if)#ip addr 192.168.192.1 255.255.192.0
R3(config-if)#no shut
```

R3(config-if) # do sh ip int br



next

Access the router R3 f0/0.

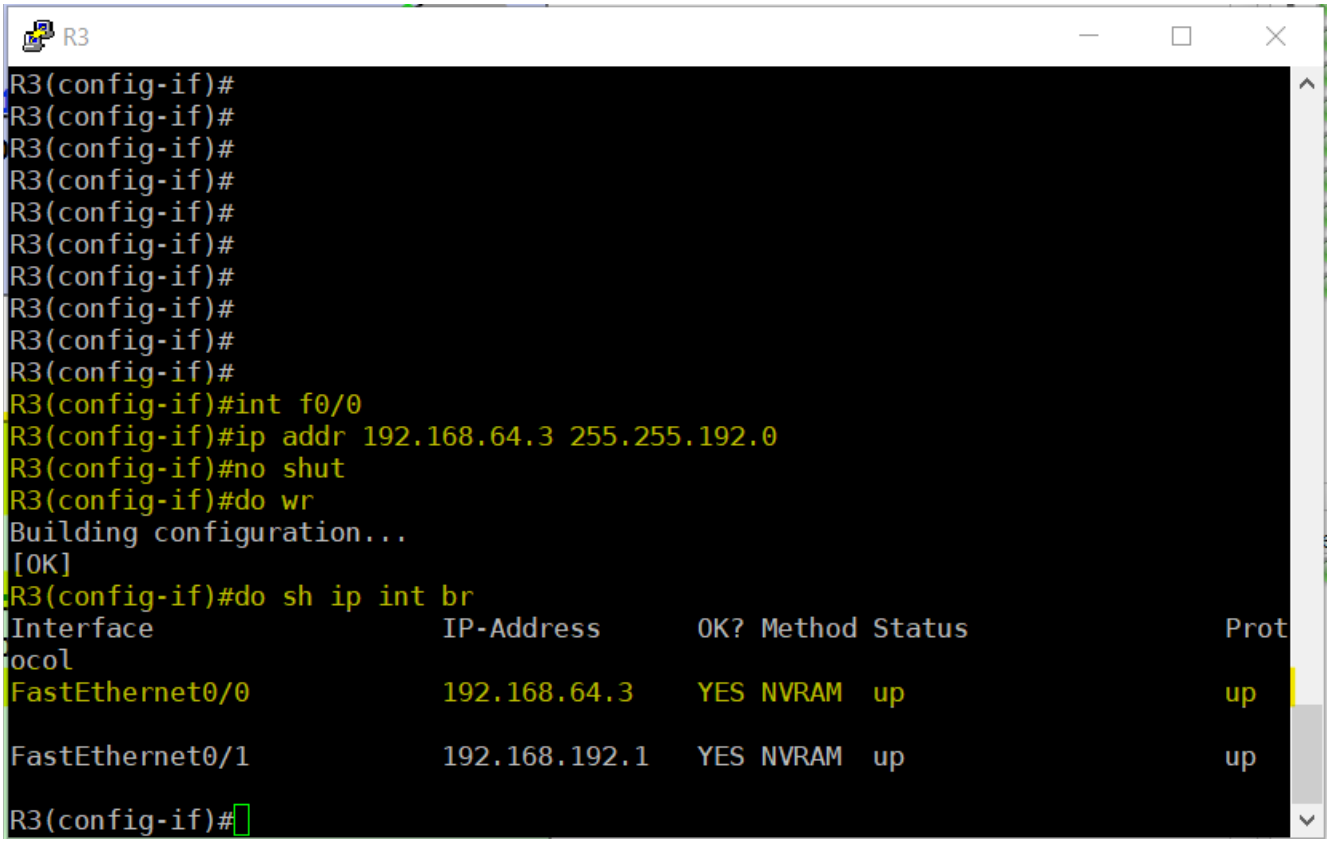
```
Enter the assigned static IPv4 address for R3 f0/0.
R3(config-if)#__________________
```

example:

Set the designated host address for the R1 f0/0 interface and enable it.

```
R1(config)#int f0/0
R1(config-if)#ip addr 192.168.64.1 255.255.192.0
R1(config-if)#no shut
```

```
R3(config)#int f0/0
R3(config-if)#ip addr 192.168.64.3 255.255.192.0
R3(config-if)#no shut
```


R3
R3(config-if)#
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R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#
R3(config-if)#int f0/0
R3(config-if)#ip addr 192.168.64.3 255.255.192.0
R3(config-if)#no shut
R3(config-if)#do wr
Building configuration...
[OK]
R3(config-if)#do sh ip int br
Interface IP-Address OK? Method Status Prot
ocol
FastEthernet0/0 192.168.64.3 YES NVRAM up up
FastEthernet0/1 192.168.192.1 YES NVRAM up up
R3(config-if)#

next

Router R3 - Interface Configurations

Enter the global configuration mode.
R3#_____

conf t — Correct Answer

Access the router R3 f0/1.

Enter the assigned static IPv4 address for R3 f0/1.
R3(config-if)# _____

ip addr 192.168.192.1 255.255.192.0 — Correct Answer

Enable the R3 f0/1 interface.
R3(config-if)#_____

no shut — Correct Answer

Access the router R3 f0/0.

Enter the assigned static IPv4 address for R3 f0/0.
R3(config-if)#_____

ip addr 192.168.64.3 255.255.192.0 — Correct Answer

Enable the R3 f0/1 interface.
R3(config-if)#_____

no shut — Correct Answer

Save the running-config to startup-config while in the interface level config mode.
R3(config-if)#_____

Return to the Privilege EXEC mode.
R3(config-if)#**end**

do wr — Correct Answer

next

Configure the static routes for each router.

Use the Router R1 - Static Routes section in the description for reference to configure the static routes on both routers R2 and R3.

No answer needed | Question Done

Router R2 - Static Routes

Static route format: <*destination_subnet*> <*destination_subnet_mask*> <*next_hop_address*>

Enter the global configuration mode.

Add the static route destined for 192.168.0.0/18 (subnet #1).
R2(config)#_____

Answer format: ** ***** ***.***.*.* ***.***.***.* ***.***.**.* | Submit

Add the static route destined for 192.168.192.0/18 (subnet #4).
R2(config)#_____

ip route 192.168.192.0 255.255.192.0 192.168.64.3 | Correct Answer

Display the current static routing table in the global config mode.
R2(config)#_____

Return to the global config mode.

Save the running-config to startup-config in the global config mode.

Answer format: ** ** ** ***** ****** | Submit

Configure the static routes for each router.

Use the Router R1 - Static Routes section in the description for reference to configure the static routes on both routers R2 and R3.

Router R2 - Static Routes
Static route format: <*destination_subnet*> <*destination_subnet_mask*> <*next_hop_address*>

Enter the global configuration mode.

Add the static route destined for 192.168.0.0/18 (subnet #1).
R2(config)#_____

example:

Static route format: <destination_subnet> <destination_subnet_mask> <next_hop_address>

Display the current static routing table in Privilege EXEC mode. It should be

empty at this point.

```
R1#sh ip route static
```

//I don't have a screenshot of the blank

//This is what it looks like for R3:

Enter the global configuration mode.

```
R1#conf t
```

Add the static route destined for 192.168.128.0/18 (subnet #3).

```
R1(config)#ip route 192.168.128.0 255.255.192.0 192.168.64.2
```

Add the static route destined for 192.168.128.0/18 (subnet #4).

```
R1(config)#ip route 192.168.192.0 255.255.192.0 192.168.64.3
```

Display the current static routing table in global config mode.

```
R1(config-if)#do sh ip route static
```

Verify that the appropriate next hop address in the static routing table as entered.

Return to the global config mode.

```
R1(config-if)#exit
```

```
Add the static route destined for 192.168.0.0/18 (subnet #1).
R2(config)#_____________________
```

```
R2(config)#ip route 192.168.0.0 255.255.192.0 192.168.64.1
```

```
Add the static route destined for 192.168.192.0/18 (subnet #4).
R2(config)#_____________________
```

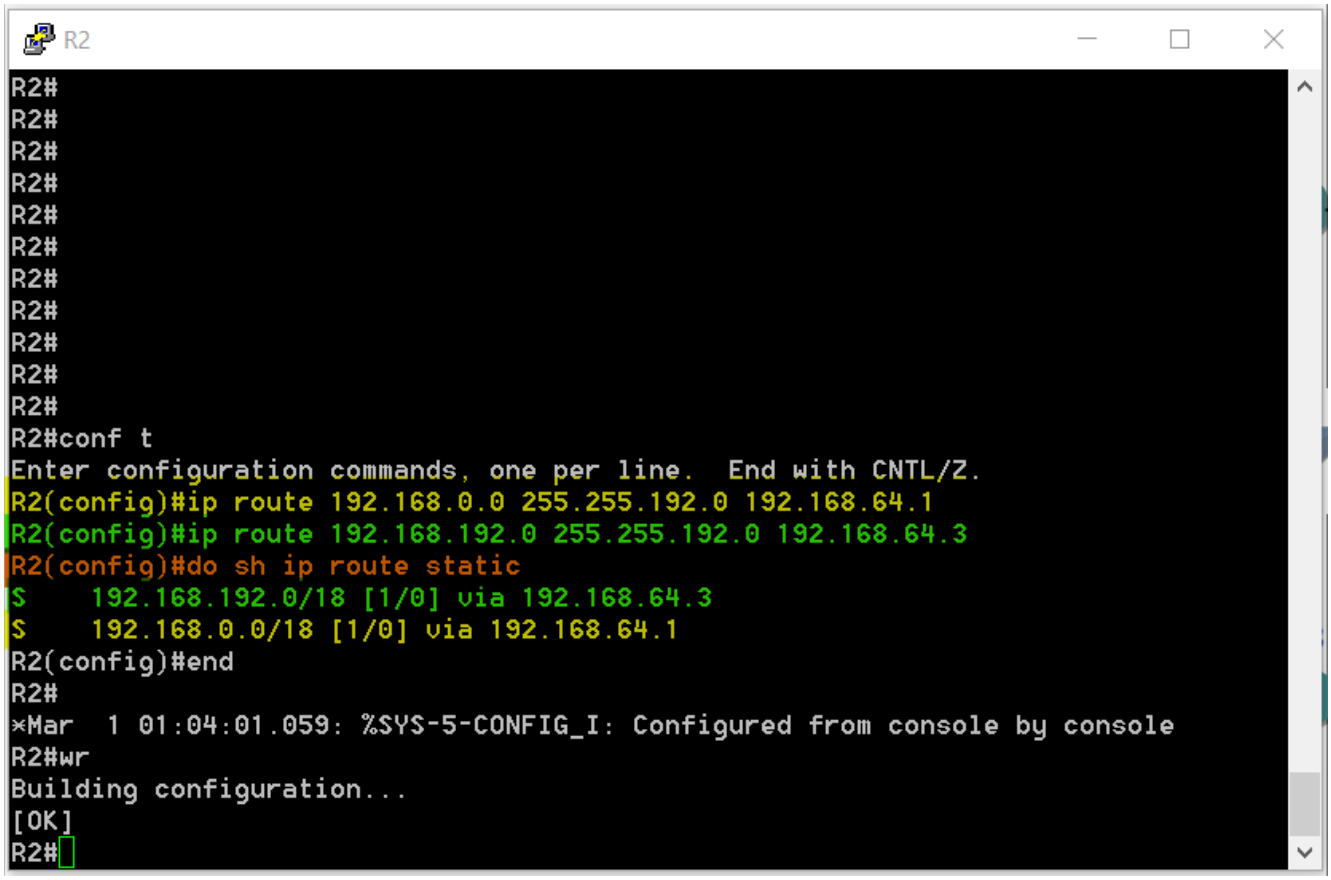
R2 (config) # ip route 192.168.**192**.0 255.255.192.0 192.168.64.**3**

```
Display the current static routing table in the global config mode.
R2(config)#_____________________
```

Return to the global config mode.

Save the running-config to startup-config in the global config mode.

```
R2(config-if)#do sh ip route static
```



next

Router R2 - Static Routes

Static route format: *<destination_subnet> <destination_subnet_mask> <next_hop_address>*

Enter the global configuration mode.

Add the static route destined for 192.168.0.0/18 (subnet #1).
R2(config)#_____

ip route 192.168.0.0 255.255.192.0 192.168.64.1 — Correct Answer

Add the static route destined for 192.168.192.0/18 (subnet #4).
R2(config)#_____

ip route 192.168.192.0 255.255.192.0 192.168.64.3 — Correct Answer

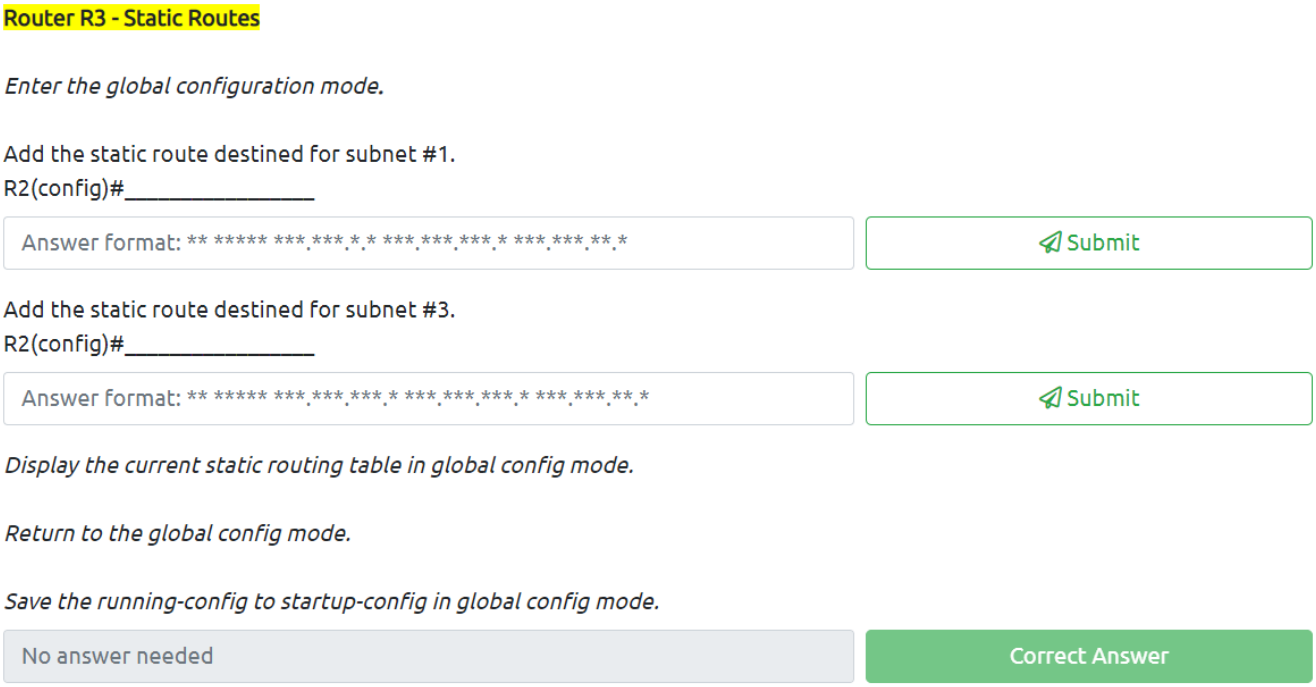
Display the current static routing table in the global config mode.
R2(config)#_____

Return to the global config mode.

Save the running-config to startup-config in the global config mode.

do sh ip route static — Correct Answer

next



tutorial again:

Router R1 - Static Routing

Static route format: <destination_subnet> <destination_subnet_mask> <next_hop_address>

Display the current static routing table in Privilege EXEC mode. It should be empty at this point.

```
R1#sh ip route static
```

```
R3#sh ip route static
```

Enter the global configuration mode.

```
R1#conf t
```

Add the static route destined for 192.168.128.0/18 (subnet #3).

```
R1(config)#ip route 192.168.128.0 255.255.192.0 192.168.64.2
```

Add the static route destined for 192.168.128.0/18 (subnet #4).
R1(config)#**ip route 192.168.192.0 255.255.192.0 192.168.64.3**

Display the current static routing table in global config mode.
R1(config-if)#**do sh ip route static**

Verify that the appropriate next hop address in the static routing table as entered**.**

Return to the global config mode.
R1(config-if)#**exit**

Router R3 - Static Routes

Enter the global configuration mode.

Add the static route destined for subnet #1.
R3(config)#_____

Add the static route destined for 192.168.0.0/18 (subnet #1).
R2(config)#_____

R2(config)#**ip route 192.168.0.0 255.255.192.0 192.168.64.1**

R3(config)#**ip route 192.168.0.0 255.255.192.0 192.168.64.1**

Add the static route destined for subnet #3.
R3(config)#_____

Add the static route destined for 192.168.128.0/18 (subnet #3).
R1(config)#**ip route 192.168.128.0 255.255.192.0 192.168.64.2**

R3(config)#**ip route 192.168.128.0 255.255.192.0 192.168.64.2**

Display the current static routing table in global config mode.

Return to the global config mode.

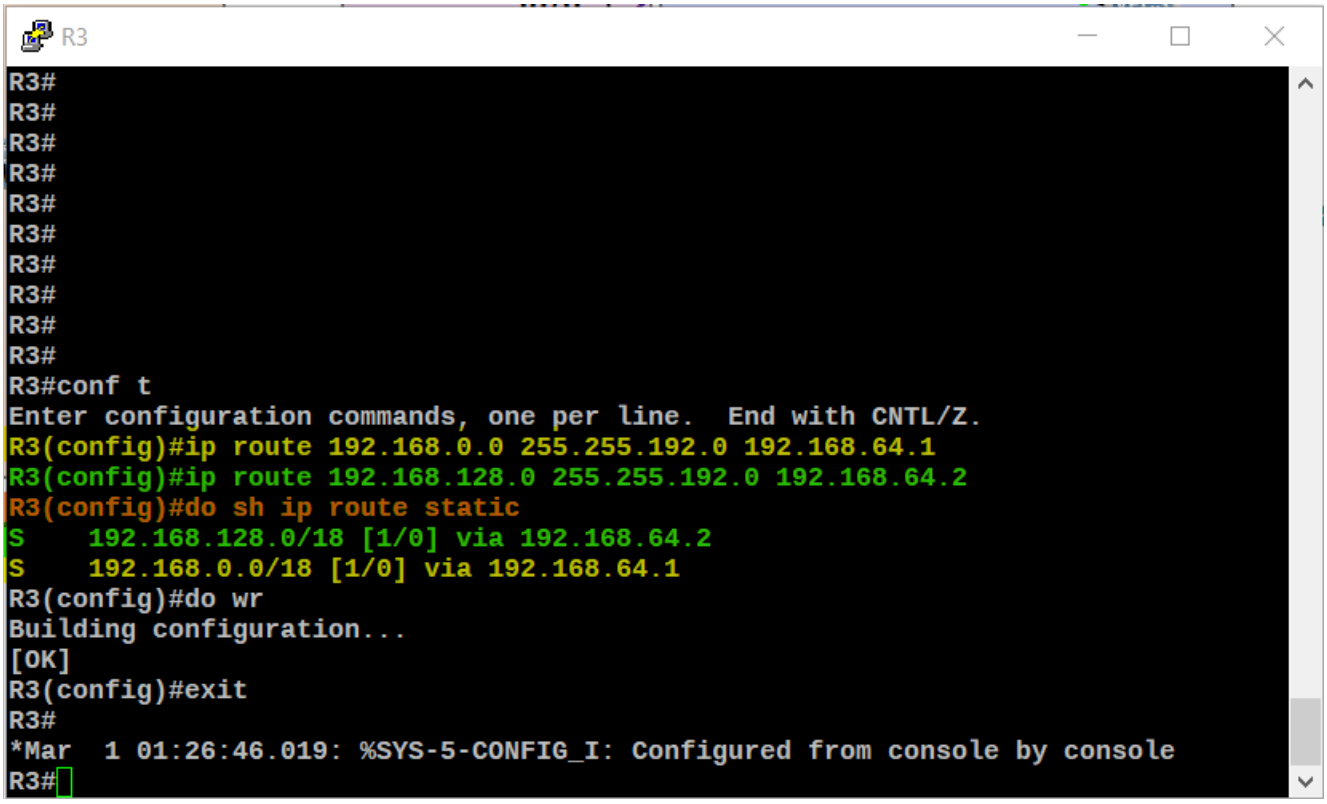
Save the running-config to startup-config in global config mode.

Display the current static routing table in global config mode.
R3(config-if)#**do sh ip route static**

Verify that the appropriate next hop address in the static routing table as entered**.**

Return to the global config mode.

```
R3(config-if)#exit
```



next

Router R3 - Static Routes

Enter the global configuration mode.

Add the static route destined for subnet #1.
R2(config)#_____

ip route 192.168.0.0 255.255.192.0 192.168.64.1 | Correct Answer

Add the static route destined for subnet #3.
R2(config)#_____

ip route 192.168.128.0 255.255.192.0 192.168.64.2 | Correct Answer

Display the current static routing table in global config mode.

Return to the global config mode.

Save the running-config to startup-config in global config mode.

No answer needed | Correct Answer

Configure each router's DHCP service.

Use the Router R1 - DHCP Service section in the description for reference to configure the DHCP service on both routers R2 and R3.

No answer needed | Correct Answer

next

Router R2 - DHCP Service

Enable the DHCP service.

Create a DHCP pool named subnet-3.
R2(config)#_____

Answer format: ** **** **** ********

Submit

Use the corresponding subnet #3 network address.
R2(dhcp-config)#_____

Answer format: ******* ***.***.***.* ***.***.***.*

Submit

Set the lease time to 3 days, 20 hours and 22 minutes.
R2(dhcp-config)#_____

Answer format: ***** * ** **

Submit

Set the designated default gateway.
R2(dhcp-config)#_____

Answer format: ************** ***.***.***.*

Submit

Exclude both 192.168.128.1 and 192.168.128.4 from the DHCP pool named subnet-3.
R2(dhcp-config)**#ip dhcp excluded-address 192.168.128.1**
R2(config)#_____

Answer format: ** **** **************** ***.***.***.*

Submit

Use PC3 to obtain an IPv4 address from the R2 DHCP server.

No answer needed

Correct Answer

Display the DHCP leased address from the router. Note that it is okay if the address is different as labeled in the diagram.
R2(config)#_____

Answer format: ** ** ** **** ****

Submit

Save the running-config to startup-config.

No answer needed

Correct Answer

tutorial:

Router R1 - DHCP Service

Enable DHCP service
`R1(config)#`**`service dhcp`**

Create a DHCP pool named subnet-1.
`R1(config)#`**`ip dhcp pool subnet-1`**

Assign the subnet #1 address to the DHCP pool.

```
R1(dhcp-config)#network 192.168.0.0 255.255.192.0
```

Set the lease time to 1 day. lease format: <*days*> <*hours*> <*minutes*>

```
R1(dhcp-config)#lease 1 0 0
```

Set the designated default gateway.

```
R1(dhcp-config)#default-router 192.168.0.1
```

Note: The DHCPOFFER message sent to the client by the DHCP server will include both of the lease time and gateway address along with the available IPv4 address.

Exclude the host address range that were already assigned (f0/1 and PC2) through static assignments. It can be used with a single address or range using two IP addresses. Use the help (?) command to better understand this command.

```
R1(dhcp-config)#ip dhcp excluded-address 192.168.0.1 192.168.0.2
```

Save the running-config to startup-config under the global configuration mode.

```
R1(config)#do wr
```

Display DHCP leases, if any, in the global config mode. It should be empty. Let PC1 successfully lease an IP address from the DHCP server (R1), then run it again. Note that it is okay if the address is different as labeled in the diagram.

```
R1(config)#do sh ip dhcp bind
```

Router R2 - DHCP Service

Enable the DHCP service.

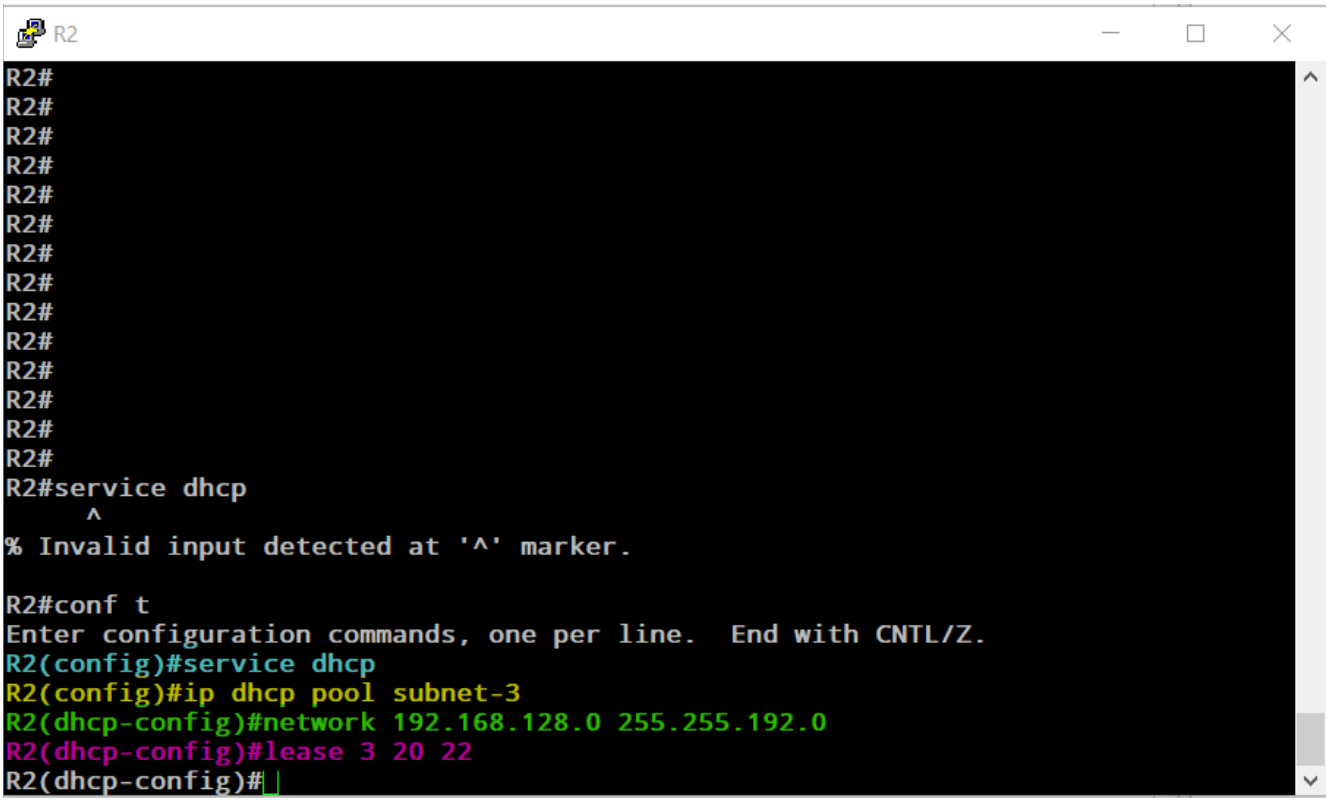
```
R2(config)#service dhcp
```

Create a DHCP pool named subnet-3.

```
R2(config)#_________________
R2(config)#ip dhcp pool subnet-3
```

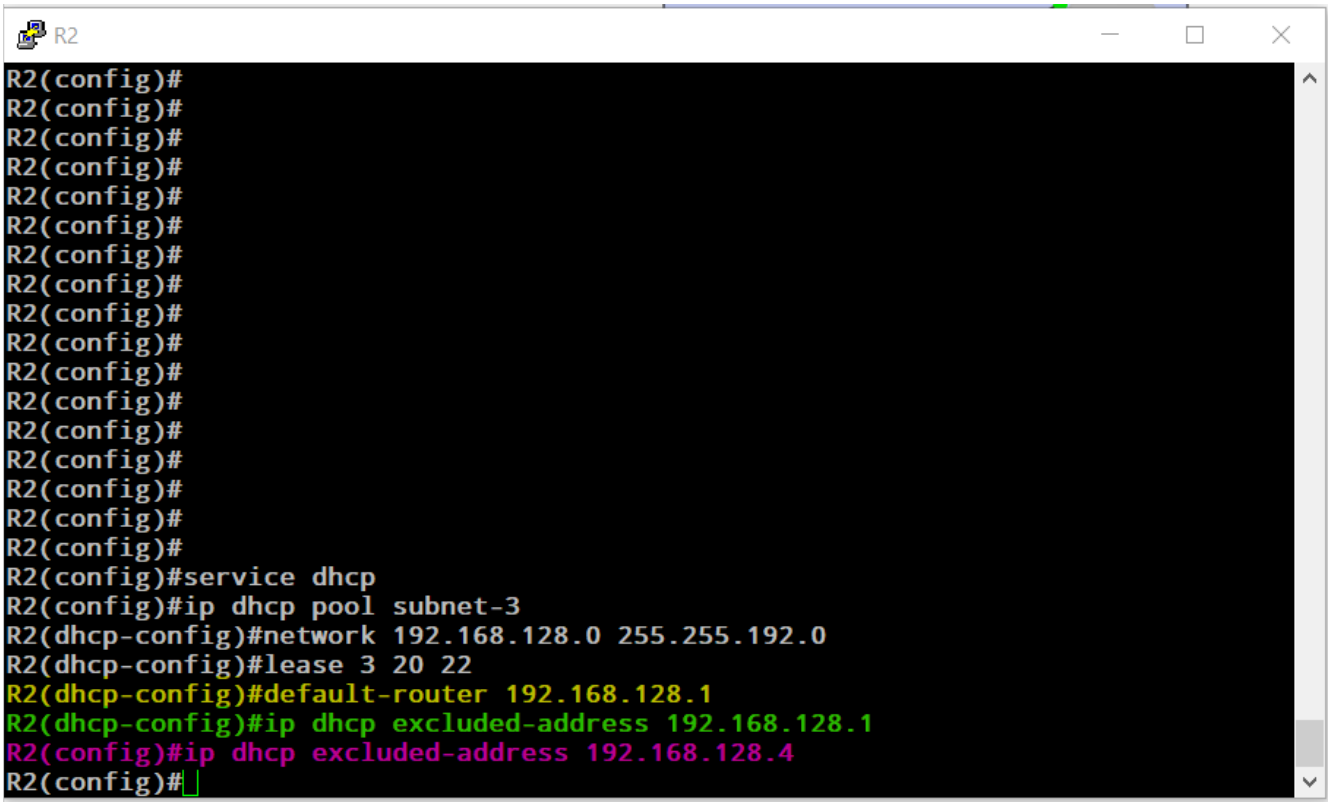
Assign the subnet #1 address to the DHCP pool.

```
R1(dhcp-config)#network 192.168.0.0 255.255.192.0
Use the corresponding subnet #3 network address.
R2(dhcp-config)#____________________
R2(dhcp-config)#network 192.168.128.0 255.255.192.0

Set the lease time to 3 days, 20 hours and 22 minutes.
R2(dhcp-config)#lease 3 20 22
```

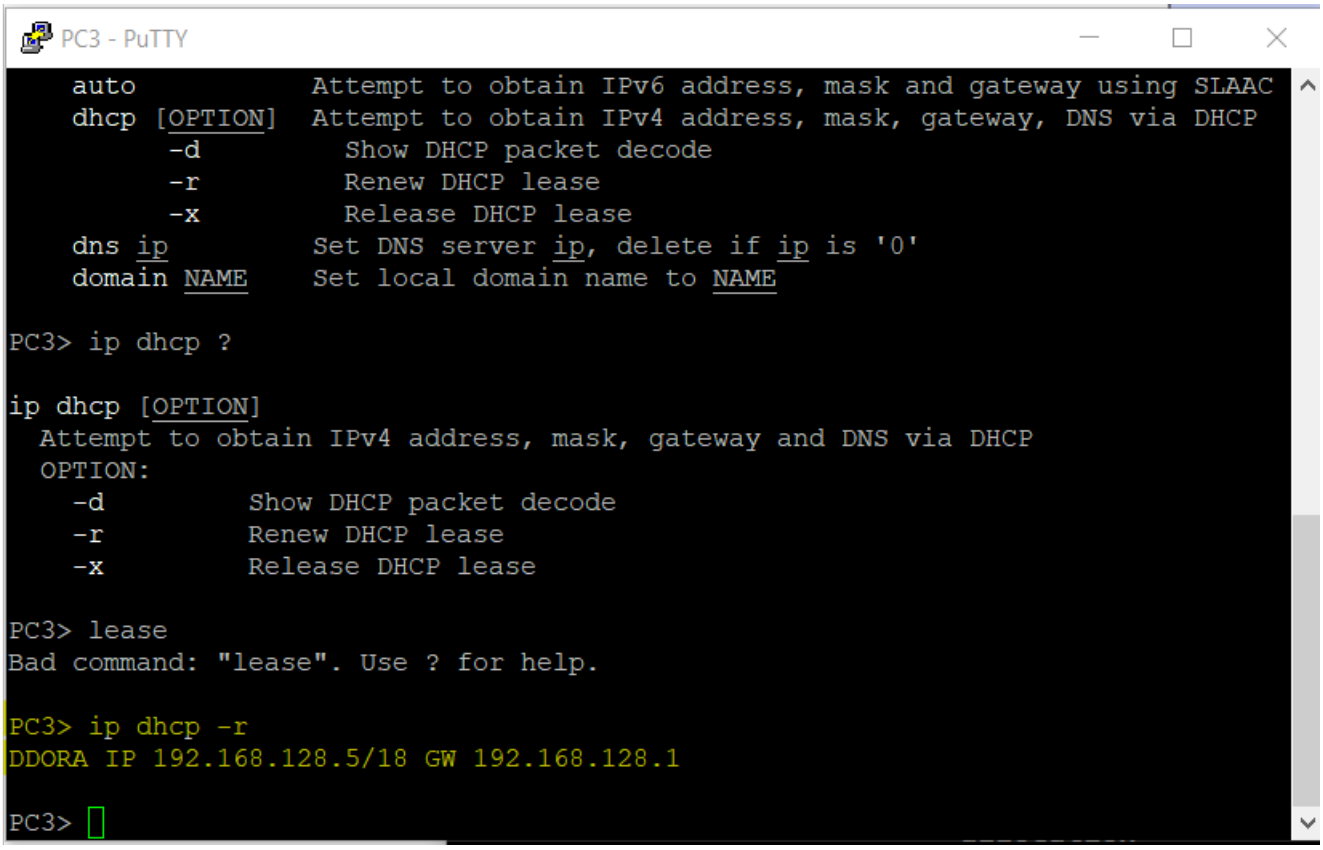


Set the designated default gateway.

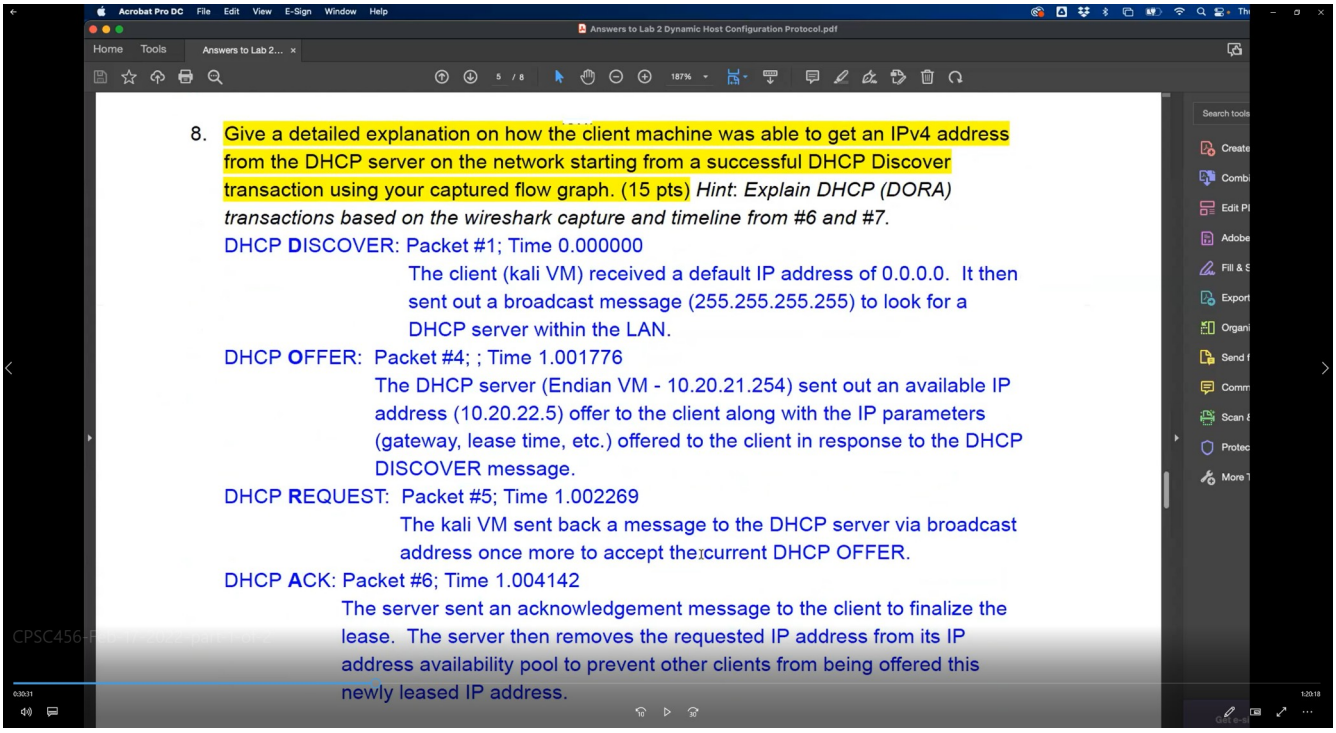
```
R1(dhcp-config)#default-router 192.168.0.1

Set the designated default gateway.
R2(dhcp-config)#____________________
R2(dhcp-config)#default-router 192.168.128.1


Exclude both 192.168.128.1 and 192.168.128.4 from the DHCP pool named
subnet-3.
R2(dhcp-config)#ip dhcp excluded-address 192.168.128.1
R2(config)#____________________
R2(dhcp-config)#ip dhcp excluded-address 192.168.128.4
```



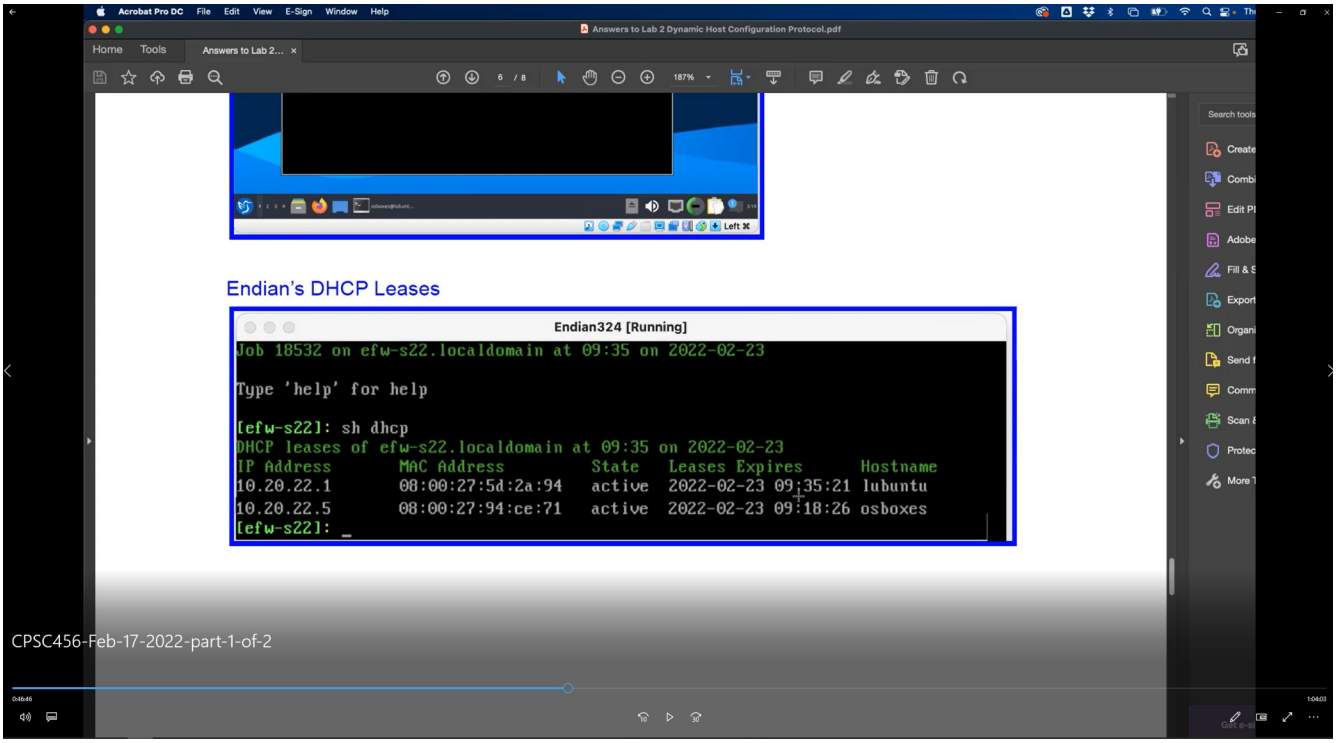
Use PC3 to obtain an IPv4 address from the R2 DHCP server.



Material for helping on dhcp:



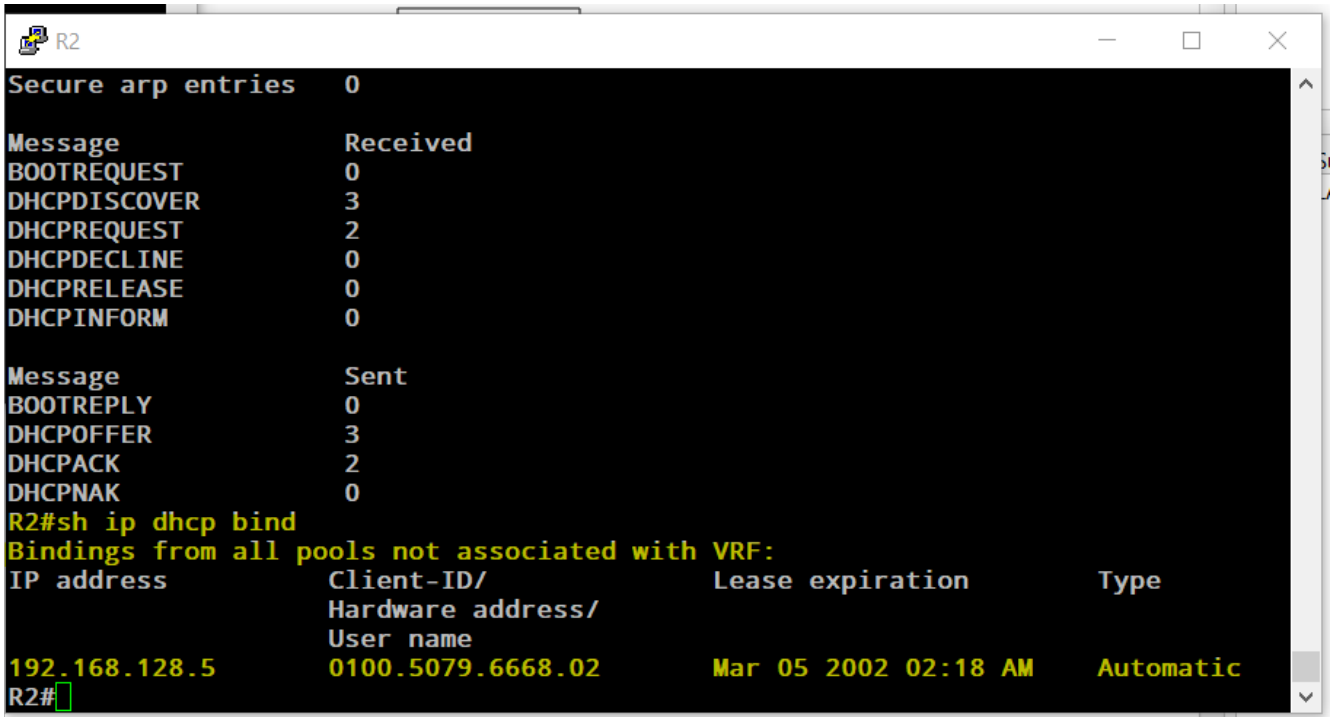
next



note: above doesn't seem to work by itself on the router
next

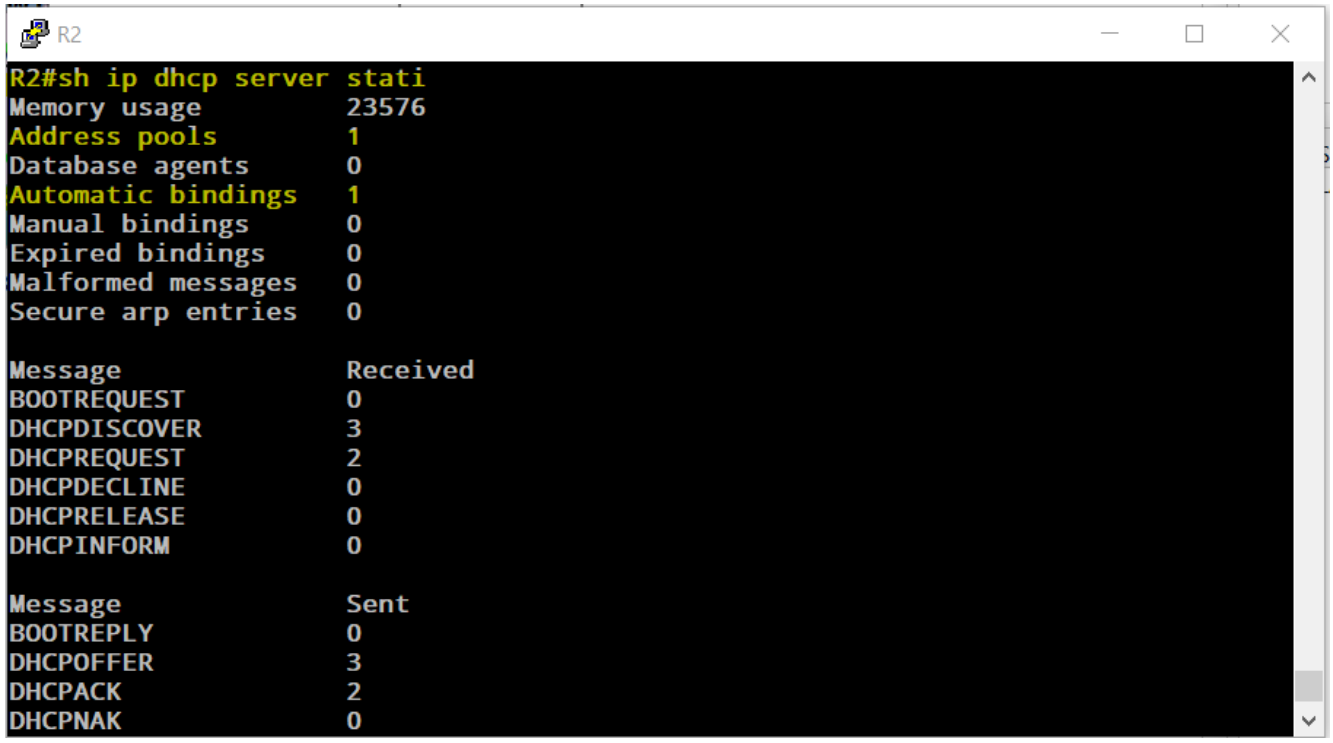
```
Display the DHCP leased address from the router.  Note that it is
okay if the address is different as labeled in the diagram.
R2(config)#____________________
```

R2(config) # do sh ip dhcp bind



next

misc how to see server info:



next

Router R2 - DHCP Service

Enable the DHCP service.

Create a DHCP pool named subnet-3.
R2(config)#_____

ip dhcp pool subnet-3 — Correct Answer

Use the corresponding subnet #3 network address.
R2(dhcp-config)#_____

network 192.168.128.0 255.255.192.0 — Correct Answer

Set the lease time to 3 days, 20 hours and 22 minutes.
R2(dhcp-config)#_____

lease 3 20 22 — Correct Answer

Set the designated default gateway.
R2(dhcp-config)#_____

default-router 192.168.128.1 — Correct Answer

Exclude both 192.168.128.1 and 192.168.128.4 from the DHCP pool named subnet-3.
R2(dhcp-config)**#ip dhcp excluded-address 192.168.128.1**
R2(config)#_____

ip dhcp excluded-address 192.168.128.4 — Correct Answer

Use PC3 to obtain an IPv4 address from the R2 DHCP server.

No answer needed — Correct Answer

Display the DHCP leased address from the router. Note that it is okay if the address is different as labeled in the diagram.
R2(config)#_____

do sh ip dhcp bind — Correct Answer

Save the running-config to startup-config.

No answer needed — Correct Answer

next

Router R3 - DHCP Service

Enable the DHCP service.

Create a DHCP pool named subnet-4.
R3(config)#_____

Answer format: ** **** **** ********

Submit

Use the corresponding subnet #3 network address
R3(dhcp-config)#_____

Answer format: ******* ***.***.***.* ***.***.***.*

Submit

Set the lease time to 7 days.
R3(dhcp-config)#_____

Answer format: ***** *

Submit

Set the designated default gateway.
R3(dhcp-config)#_____

Answer format: ************** ***.***.***.*

Submit

Exclude all hosts between 192.168.192.1 and 192.168.192.105 from the DHCP pool named subnet-4.
R3(config)#_____

Answer format: ** **** ***************** ***.***.***.* ***.***.***.***

Submit

Use PC5 to obtain an IPv4 address from the R2 DHCP server.

No answer needed

Correct Answer

Display the DHCP leased address from the router.
R3(config)#_____

Save the running-config to startup-config.

next

tutorial:

Router R1 - DHCP Service

Enable DHCP service

```
R1(config)#service dhcp
```

Create a DHCP pool named subnet-1.

```
R1(config)#ip dhcp pool subnet-1
```

Assign the subnet #1 address to the DHCP pool.

```
R1(dhcp-config)#network 192.168.0.0 255.255.192.0
```

Set the lease time to 1 day. lease format: <*days*> <*hours*> <*minutes*>

```
R1(dhcp-config)#lease 1 0 0
```

Set the designated default gateway.

```
R1(dhcp-config)#default-router 192.168.0.1
```

Note: The DHCPOFFER message sent to the client by the DHCP server will include both of the lease time and gateway address along with the available IPv4 address.

Exclude the host address range that were already assigned (f0/1 and PC2) through static assignments. It can be used with a single address or range using two IP addresses. Use the help (?) command to better understand this command.

```
R1(dhcp-config)#ip dhcp excluded-address 192.168.0.1 192.168.0.2
```

Save the running-config to startup-config under the global configuration mode.

```
R1(config)#do wr
```

Display DHCP leases, if any, in the global config mode. It should be empty. Let PC1 successfully lease an IP address from the DHCP server (R1), then run it again. Note that it is okay if the address is different as labeled in the diagram.

```
R1(config)#do sh ip dhcp bind
```

Router R3 - DHCP Service

Enable the DHCP service.

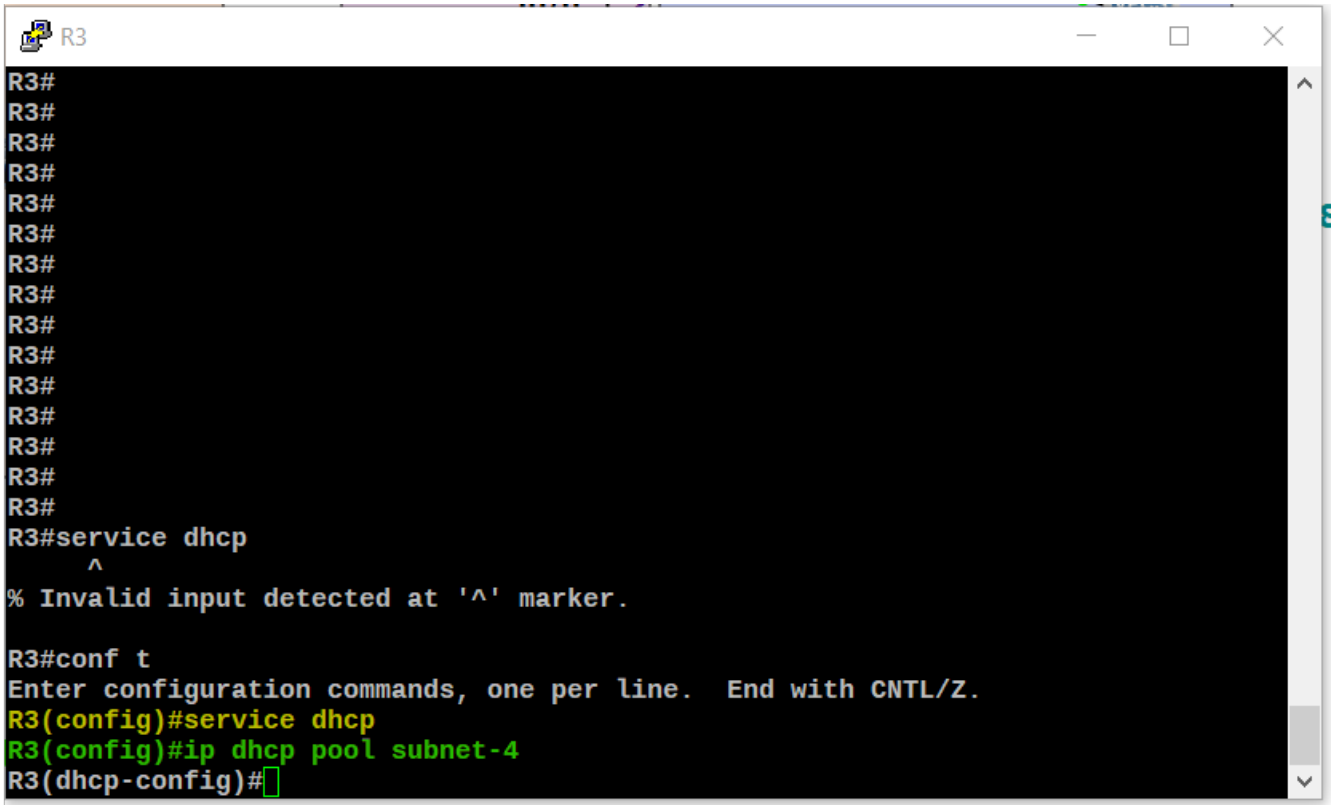
```
R3(config)# service dhcp
```

Create a DHCP pool named subnet-1.

```
R1(config)#ip dhcp pool subnet-1
```

Create a DHCP pool named subnet-4.

```
R3(config)#_________________
R3(config)#ip dhcp pool subnet-4
```



next

Assign the subnet #1 address to the DHCP pool.

```
R1(dhcp-config)#network 192.168.0.0 255.255.192.0
```

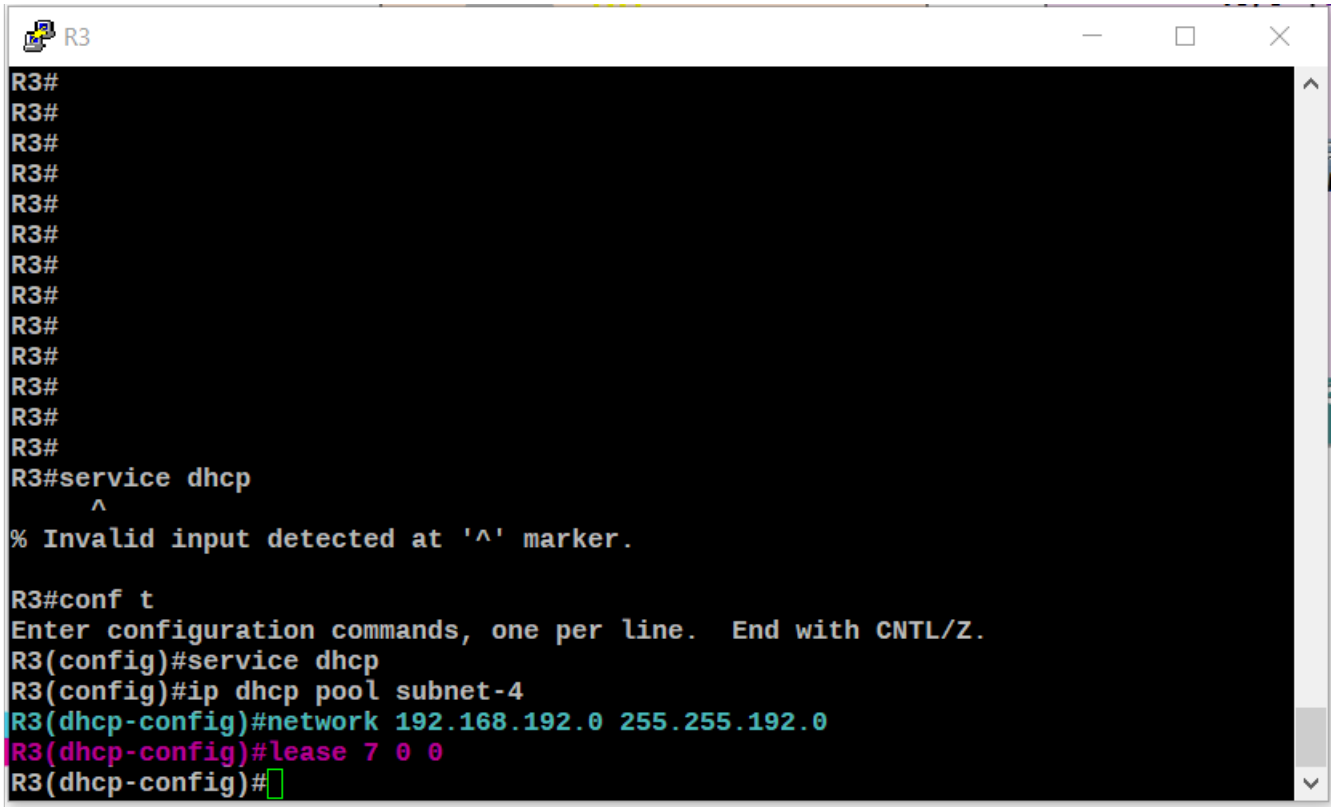
```
Use the corresponding subnet #4 network address
R3(dhcp-config)#____________________
```

```
R3(dhcp-config)#network 192.168.192.0 255.255.192.0
```

Set the lease time to 7 days.

```
R3(dhcp-config)#____________________
```

R3(dhcp-config) # lease 7 0 0


R3
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#
R3#service dhcp
^
% Invalid input detected at '^' marker.
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#service dhcp
R3(config)#ip dhcp pool subnet-4
R3(dhcp-config)#network 192.168.192.0 255.255.192.0
R3(dhcp-config)#lease 7 0 0
R3(dhcp-config)#

Router R3 - DHCP Service

Enable the DHCP service.

Create a DHCP pool named subnet-4.
R3(config)#_____

ip dhcp pool subnet-4 — Correct Answer

Use the corresponding subnet #3 network address
R3(dhcp-config)#_____

network 192.168.192.0 255.255.192.0 — Correct Answer

Set the lease time to 7 days.
R3(dhcp-config)#_____

lease 7 — Correct Answer

Set the designated default gateway.
R3(dhcp-config)#_____

Answer format: ********** ***.***.***.* — Submit

Exclude all hosts between 192.168.192.1 and 192.168.192.105 from the DHCP pool named subnet-4.
R3(config)#_____

Answer format: ** **** ********** ***.***.***.* ***.***.***.*** — Submit

Use PC5 to obtain an IPv4 address from the R2 DHCP server.

No answer needed — Correct Answer

Display the DHCP leased address from the router.
R3(config)#_____

Save the running-config to startup-config.

next

Set the designated default gateway.

```
R1(dhcp-config)#default-router 192.168.0.1
Set the designated default gateway.
R3(dhcp-config)#_____
R3(dhcp-config)#default-router 192.168.192.1
```

Note: The DHCPOFFER message sent to the client by the DHCP server will include both of the lease time and gateway address along with the available IPv4 address.

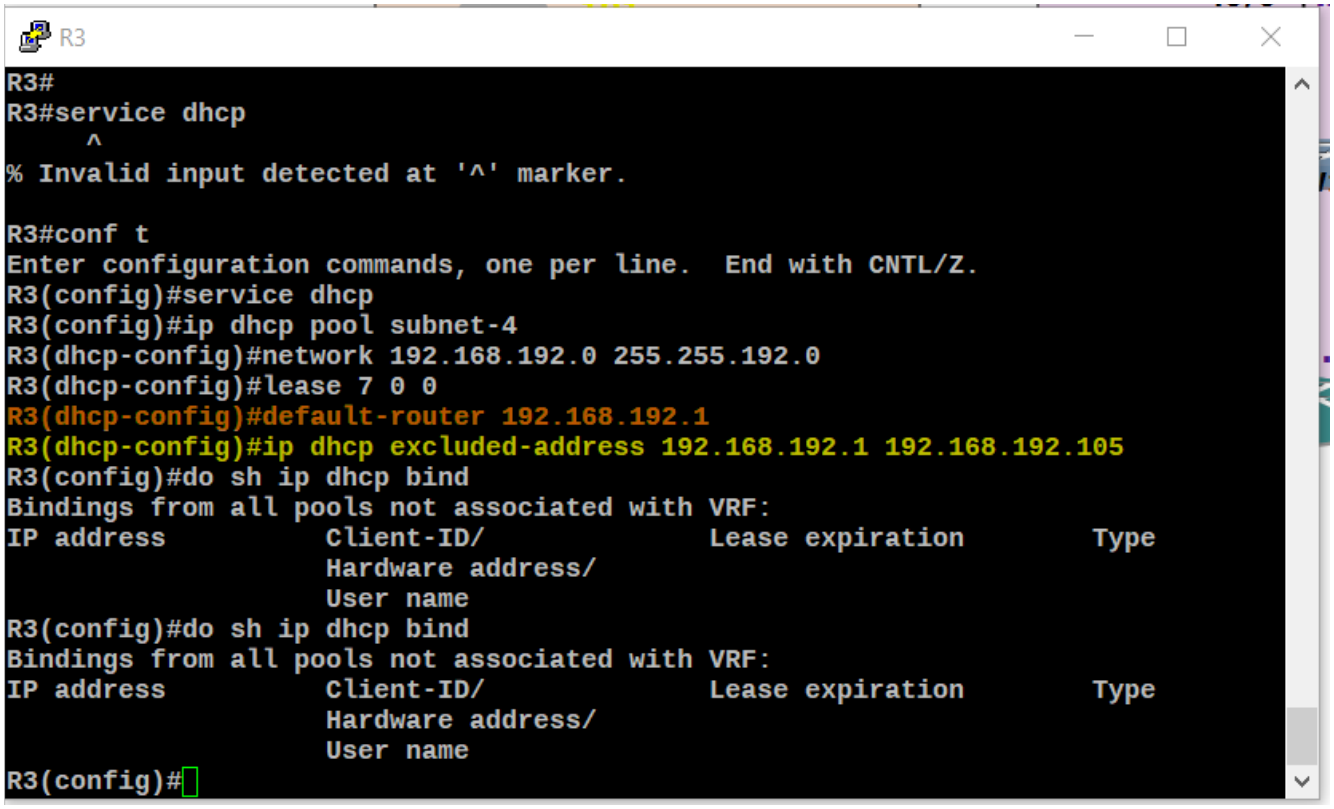
Exclude the host address range that were already assigned (f0/1 and PC2) through static assignments. It can be used with a single address or range using two IP addresses. Use the help (?) command to better understand this command.

```
R1(dhcp-config)#ip dhcp excluded-address 192.168.0.1 192.168.0.2
```

Exclude all hosts between 192.168.192.1 and 192.168.192.105 from the DHCP pool named subnet-4.

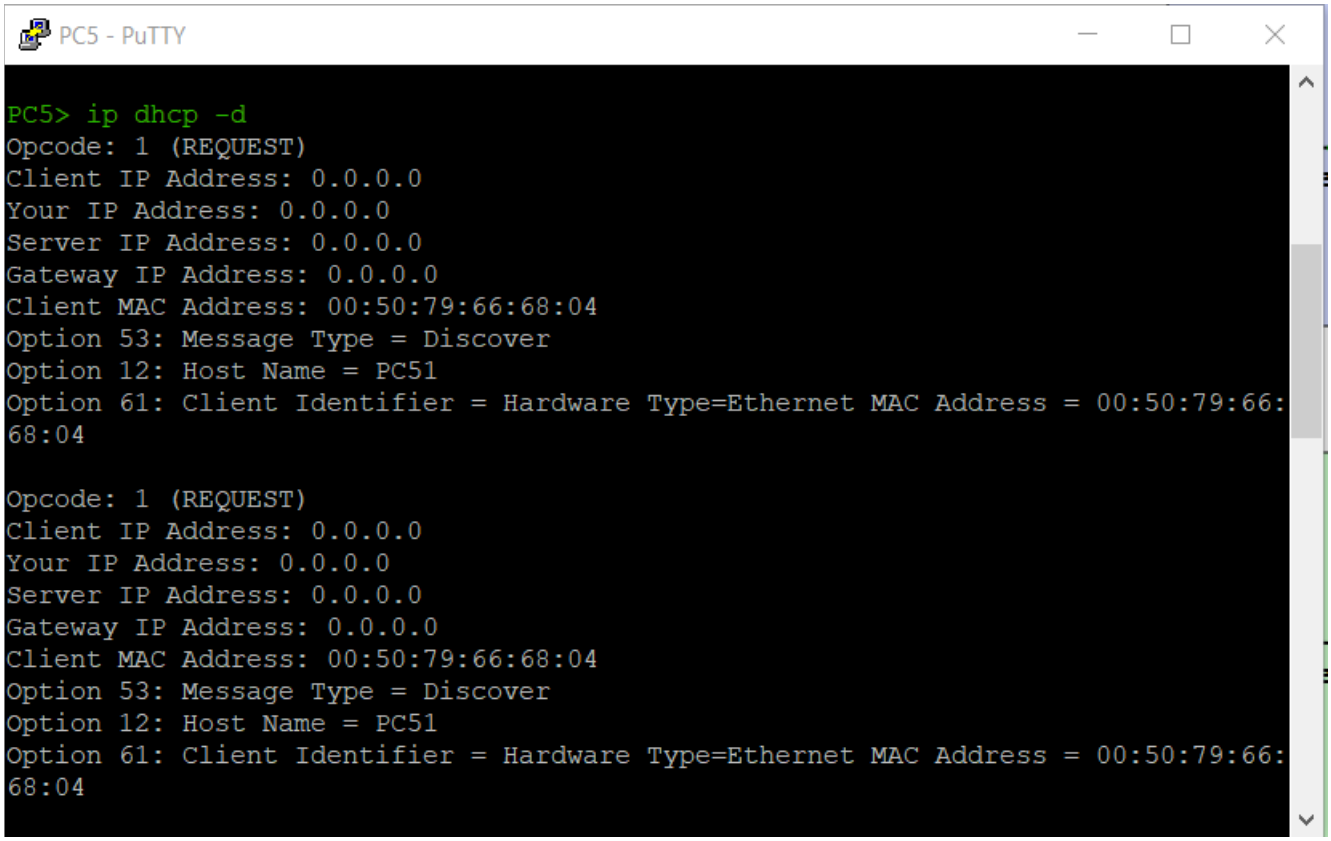
R3(config)#_____

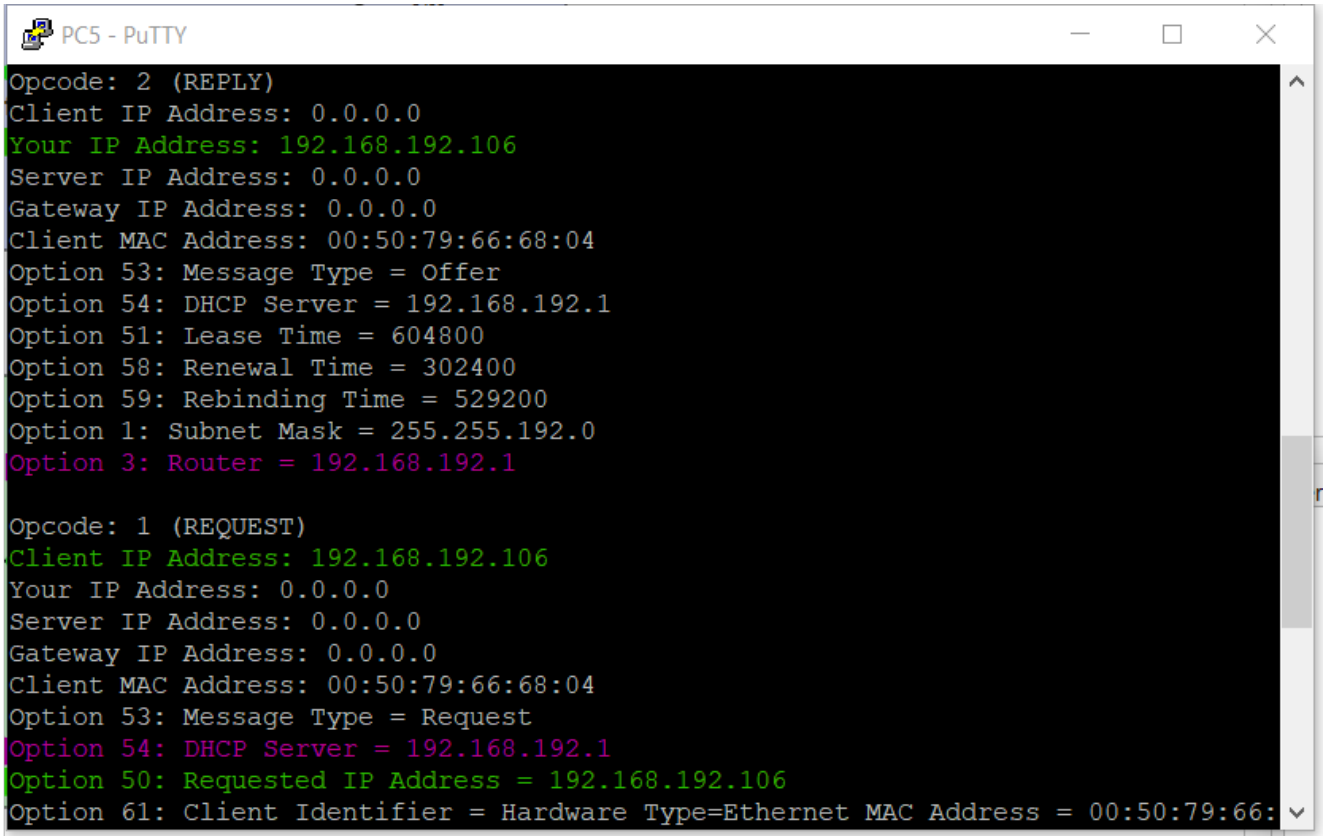
R1(dhcp-config)#ip dhcp excluded-address 192.168.192.1 192.168.192.105

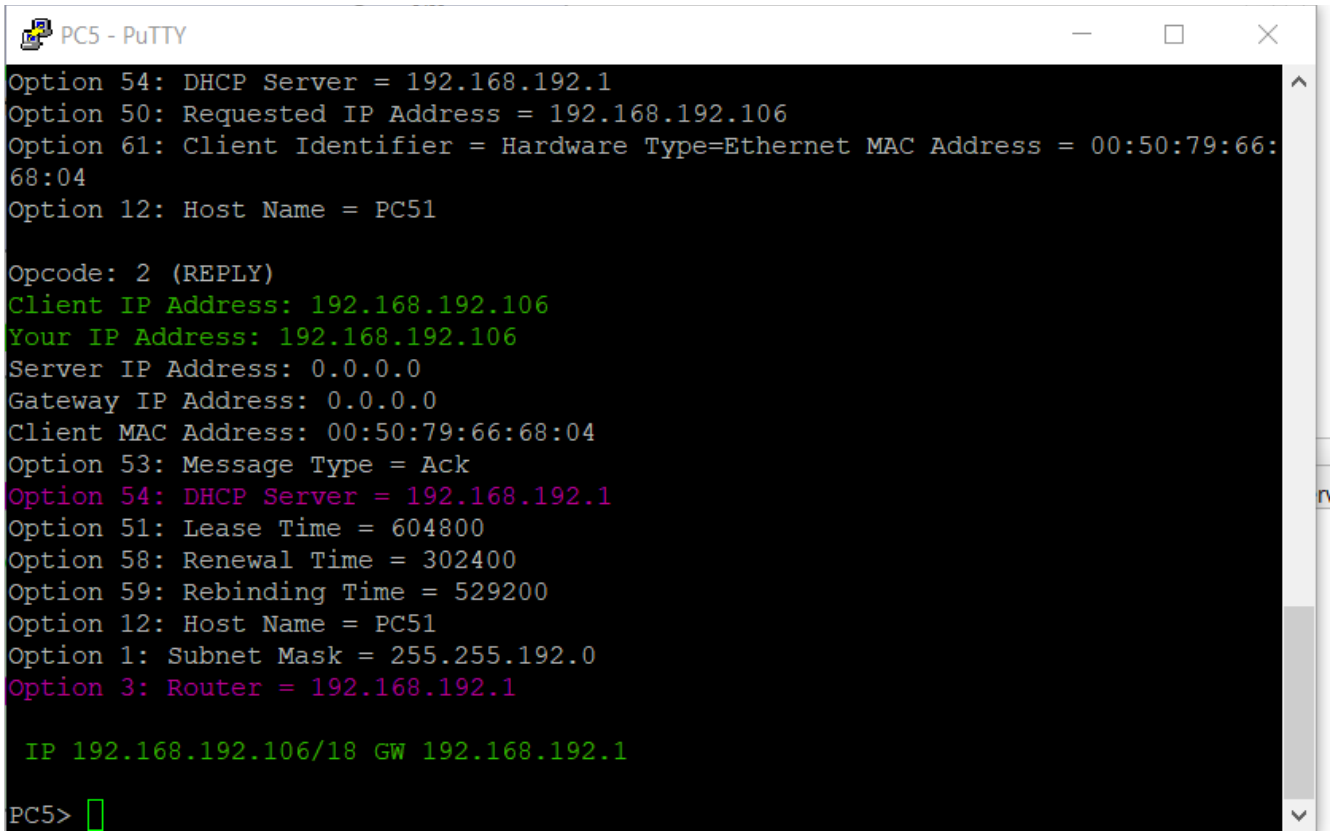


next

Use PC5 to obtain an IPv4 address from the R2 DHCP server.


PC5 - PuTTY
PC5> ip dhcp -d
Opcode: 1 (REQUEST)
Client IP Address: 0.0.0.0
Your IP Address: 0.0.0.0
Server IP Address: 0.0.0.0
Gateway IP Address: 0.0.0.0
Client MAC Address: 00:50:79:66:68:04
Option 53: Message Type = Discover
Option 12: Host Name = PC51
Option 61: Client Identifier = Hardware Type=Ethernet MAC Address = 00:50:79:66:
68:04
Opcode: 1 (REQUEST)
Client IP Address: 0.0.0.0
Your IP Address: 0.0.0.0
Server IP Address: 0.0.0.0
Gateway IP Address: 0.0.0.0
Client MAC Address: 00:50:79:66:68:04
Option 53: Message Type = Discover
Option 12: Host Name = PC51
Option 61: Client Identifier = Hardware Type=Ethernet MAC Address = 00:50:79:66:
68:04

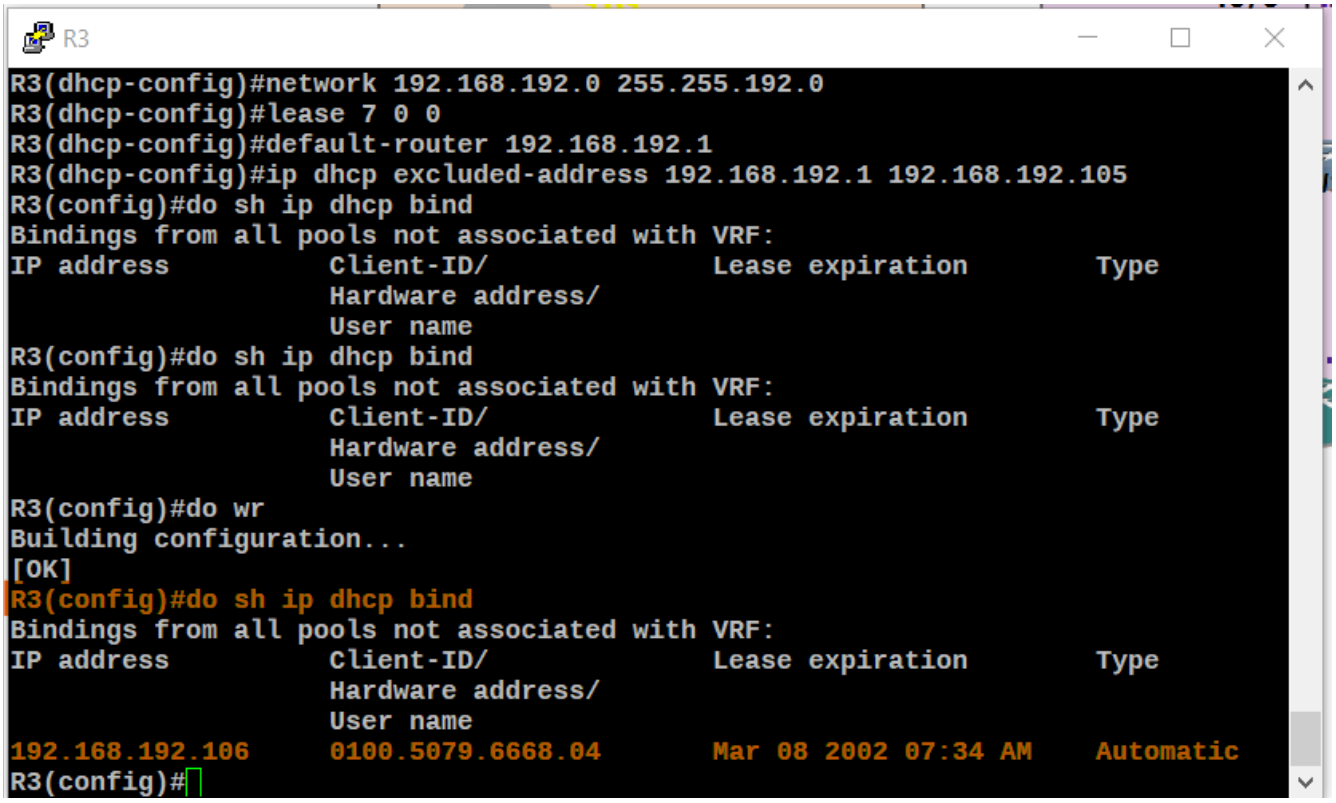

PC5 - PuTTY
Opcode: 2 (REPLY)
Client IP Address: 0.0.0.0
Your IP Address: 192.168.192.106
Server IP Address: 0.0.0.0
Gateway IP Address: 0.0.0.0
Client MAC Address: 00:50:79:66:68:04
Option 53: Message Type = Offer
Option 54: DHCP Server = 192.168.192.1
Option 51: Lease Time = 604800
Option 58: Renewal Time = 302400
Option 59: Rebinding Time = 529200
Option 1: Subnet Mask = 255.255.192.0
Option 3: Router = 192.168.192.1
Opcode: 1 (REQUEST)
Client IP Address: 192.168.192.106
Your IP Address: 0.0.0.0
Server IP Address: 0.0.0.0
Gateway IP Address: 0.0.0.0
Client MAC Address: 00:50:79:66:68:04
Option 53: Message Type = Request
Option 54: DHCP Server = 192.168.192.1
Option 50: Requested IP Address = 192.168.192.106
Option 61: Client Identifier = Hardware Type=Ethernet MAC Address = 00:50:79:66:



Display the DHCP leased address from the router.

R3(config)#_____

R3(config) # do sh ip dhcp bind



Save the running-config to startup-config.

R3(config) # do wr