<https://sites.google.com/site/myyclassnotes/networking/acnl-lab/nat-pat-configuration-in-cisco-packet-tracer>

<https://www.computernetworkingnotes.com/ccna-study-guide/how-to-configure-dynamic-nat-in-cisco-router.html>

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<https://w7cloud.com/nat-configuration-on-packet-tracer/>

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<https://w7cloud.com/packet-tracer-cisco-commands-list-cli-basic/>

Let's write both in binary:

130.45.34.36 = 10000010.00101101.00100010.00100100

255.255.240.0 = 11111111.11111111.11110000.00000000

A bitwise *AND* between the two would give us the network address:

10000010.00101101.00100010.00100100 (ip address)

AND

11111111.11111111.11110000.00000000 (subnet mask)

=

10000010.00101101.00100000.00000000 = 130.45.32.0 (the resulting network address)

A bitwise *OR* between the network address and the **inverted** subnet mask would give us the broadcast address:

10000010.00101101.00100000.00000000 (netadress)

OR

00000000.00000000.00001111.11111111 (inverted subnet mask)

=

10000010.00101101.00101111.11111111 = 130.45.47.255 (broadcast address)

<https://stackoverflow.com/questions/29034878/how-can-i-determine-network-and-broadcast-address-from-the-ip-address-and-subnet>

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**Static Routing using 3 routers in series.**

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<https://computernetworking747640215.wordpress.com/2018/07/05/how-to-configure-dhcp-server-in-packet-tracer/>

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<https://ipcisco.com/lesson/router-dhcp-configuration-with-packet-tracer-ccna/>

<https://www.packettracernetwork.com/tutorials/dhcpconfiguration.html>

**DHCP Service**

<https://www.youtube.com/watch?v=q8MlRLUAgCY>

**DHCP and DNS**

<https://www.youtube.com/watch?v=OzBUOev0Xgw>