

Assignment 3  
Computer Networks  
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**1. Across Linux, macOS, and Windows, these commands will print not one but two different routing tables. What is the difference between these two tables?**

The difference between the routing tables printed by the `netstat -nr` command is that the first table is an IPv4 table whilst the second is an IPv6 table.

**2. What column headers correspond to the ones mentioned in the introduction (network destination, subnet mask, and gateway)? Hint: on macOS, two of these may be combined.**

In Ubuntu, the first three columns (Destination | Gateway | Genmask) correspond to Network destination, gateway and subnet mask respectively.

**3. A typical destination might be expressed in two ways: as a network destination of 145.94.162.184 with subnet mask 255.255.255.255, or as those two combined as 145.94.162.184/32. How do you convert between these two formats?**

To convert from dotted-decimal notation like 255.255.255.255, we convert it to binary which in this case gives us 11111111.11111111.11111111.11111111. Now we simply count the number of logical 1s, in this case 32.