Quiz 6
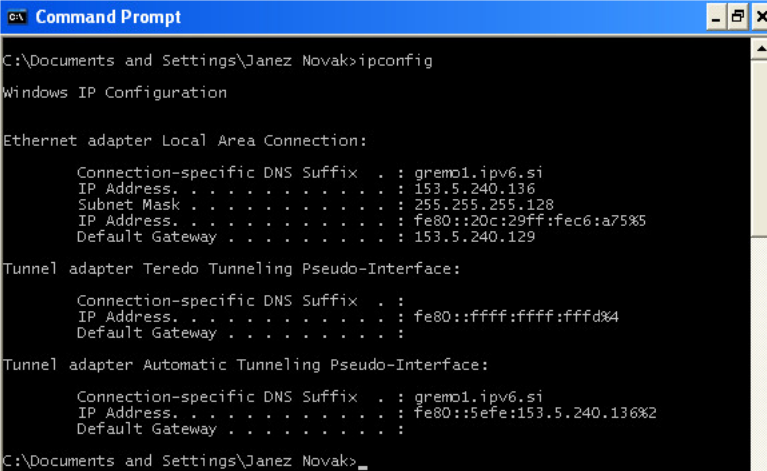
1. How many bytes[1] are there in an IPv6 address?
   a. 4
   b. 8
   c. 16
   d. 32

2. What is the prefix length for a local IPv6 network that uses SLAAC?
   a. /32
   b. /48
   c. /64
   d. /96

3. Which mask (prefix length) is assigned to a client by a DHCPv6 server?
   a. /32
   b. /64
   c. Various (depending on a server configuration)
   d. DHCPv6 server does not assign a mask to its clients; only single host (/128) addresses are being delegated.

4. In IPv6, which protocol stands instead of ARP?
   a. ICMPv6
   b. ARPv6
   c. IPv6 Neighbour Discovery (ND)
   d. IPv6 Router Advertisement (RA)

5. What is the type of the IPv6 address of the default gateway when auto-configuration (SLAAC or DHCPv6) is being used?
   a. Link-local unicast
   b. Global unicast
   c. Multicast group address *all-routers* (ff02::2)
   d. There is no default gateway for an IPv6 network

6. Are these two systems capable to communicate with remote IPv6 servers in the Internet?
   a. Yes
   b. No

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[1] Remember – one byte consists of 8 bits ☺.

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        janez@ubuntu1204: ~
janez@ubuntu1204:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0c:29:bf:81:5e
          inet addr:153.5.240.131  Bcast:153.5.240.255  Mask:255.255.255.128
          inet6 addr: fe80::20c:29ff:febf:815e/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:150 errors:0 dropped:0 overruns:0 frame:0
          TX packets:194 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:37396 (37.3 KB)  TX bytes:22667 (22.6 KB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:152 errors:0 dropped:0 overruns:0 frame:0
          TX packets:152 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:13306 (13.3 KB)  TX bytes:13306 (13.3 KB)

janez@ubuntu1204:~$
```

7. How is the DNS record that maps host name to a numerical IPv6 address called?
    a. A
    b. PTR
    c. AAAA
    d. A6

8. Is ICMPv6 important for IPv6 operation?
    a. Not really, IPv6 connectivity works fine without ICMPv6
    b. Yes, without ICMPv6 or ICMPv6 being improperly filtered there is no IPv6 connectivity

9. Which ones of these operating systems have no built-in DHCPv6 client?
    a. Microsoft Windows XP
    b. Microsoft Windows 7
    c. Microsoft Windows 8
    d. Linux Ubuntu (12 or later)
    e. Apple OS X (10.8 or later)

10. Which ones of these operating systems have no support to reach DNS server/resolver by IPv6 and therefore cannot be used in an IPv6-only network?
    a. Microsoft Windows XP
    b. Microsoft Windows 7
    c. Microsoft Windows 8
    d. Linux Ubuntu (12 or later)
    e. Apple OS X (10.8 or later)