* What is your public IP address right now, and how did you find it?

**I wrote “what’s my ip” into google. You could also use the website**  [ip4.me](http://ip4.me/) **to find out what your IP address is.**

**The easiest way to find your public IP address is by asking a website, since that website sees your public IP address and can tell it to you.**

* What is your private IP address right now (do this both at home and in school), and who/what gave you that address?

**My private IP is 192.168.0.27 at home. I manually changed this in Windows under Control Panel -> Network and Internet - > Network Connections -> right click, properties ‘Ethernet’ - > Double click on “Internet Protocol Version 4 (TCP/IPv4) - > Choose your IP address, Subnet mask and default gateway. The default gateway is 192.168.0.1, so your local IP-address has to be 192.1168.0.xx.**

* What’s special about these address ranges?
  + 10.0.0.0 – 10.255.255.255
  + 172.16.0.0 – 172.31.255.255
  + 192.168.0.0 – 192.168.255.255
* What’s special about this ip-address: 127.0.0.1?

**It’s the localhost IP-address and it specifically refers to the client itself.**

* What kind of service would you expect to find on a server using these ports: 22, 23, 25, 53, 80, 443?

1. **Port 22 is for Secure Shell (SSH), secure logins, file transfers (scp, sftp) and port forwarding**
2. **Port 23 is for the Telnet protocol – unencrypted text communications**
3. **Port 25 is Simple Mail Transfer Protocol (SMTP), used for email routing between mail servers.**
4. **Port 53 is for Domain Name System (DNS)**
5. **Port 80 is for Hypertext Transfer Protocol (HTTP) officially, but also unofficially for QUIC – a new protocol designed by Google.**
6. **Port 443 is for Hypertext Transfer Protocol over TLS/SSL (HTTPS) officially, but also unofficially for Quick UDP Internet connections (QUIC) – a new protocol designed by Google.**

* What is the IP address of studypoints.info and how did you find it?

**The IP-address of studypoints.info is 157.230.21.145. I used the ‘tracert’-command in command prompt to find the IP-address.   
  
Example:  
  
tracert studypoints.info**

**You could also find the IP-address by using the ‘nslookup’-command.  
  
Example:  
  
nslookup studypoints.info**

* If you write https://studypoints.info in your browser, how did “it” figure out that it should go to the IP address you discovered above?
* Explain shortly the purpose of an IP-address and a port-number and why we need both
* What is your (nearest) DNS server?

**This is not necessarily an easy question to answer, but the most obvious answer is that your ISP’s own DNS servers are your nearest DNS servers usually.**

* What is (conceptually) the DNS system and the purpose with a DNS Server?
* What is your current Gateway, and how did you find it?

**My current default gateway is 192.168.0.1. I found it by using the “ipconfig”-command in command prompt. This is your routers private IP address and it can also be found in Windows under Control Panel -> Network and Internet - > Network Connections -> right click, properties, ‘Ethernet’ - > Double click on “Internet Protocol Version 4 (TCP/IPv4)**

* What is the address of your current DHCP-Server, and how did you find it?

**The answer is the same as above. You can either use the “ipconfig”-command in command prompt or go to “Network Connections” under Control Panel in Windows to find the answer.**

* Explain (conceptually) about the TCP/IP-protocol stack
* Explain about the HTTP Protocol (the following exercises will go much deeper into this protocol)
* Explain (conceptually) how HTTP and TCP/IP are connected (what can HTTP do, and where does it fit into TCP/IP)