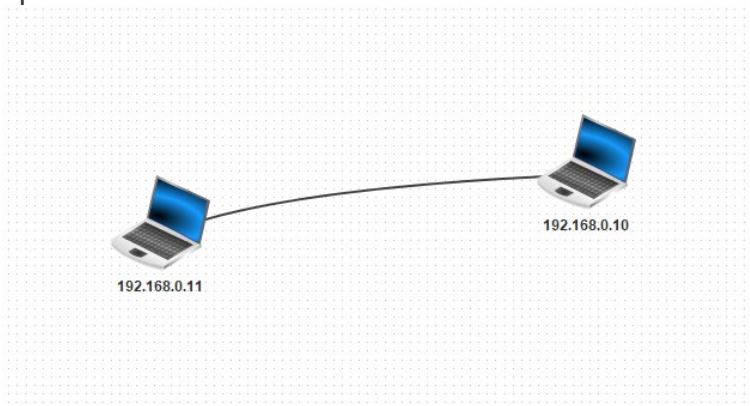
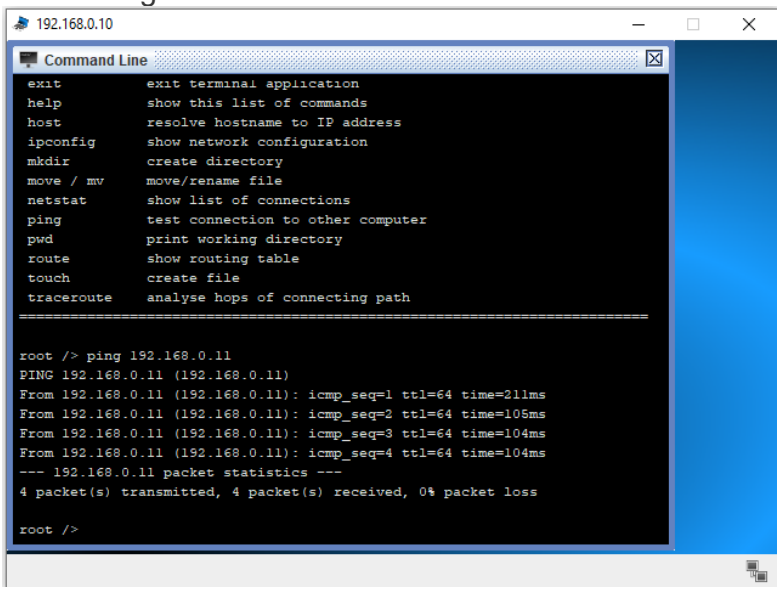
Opdracht Filius

Deel 1

opdracht 1.3.1



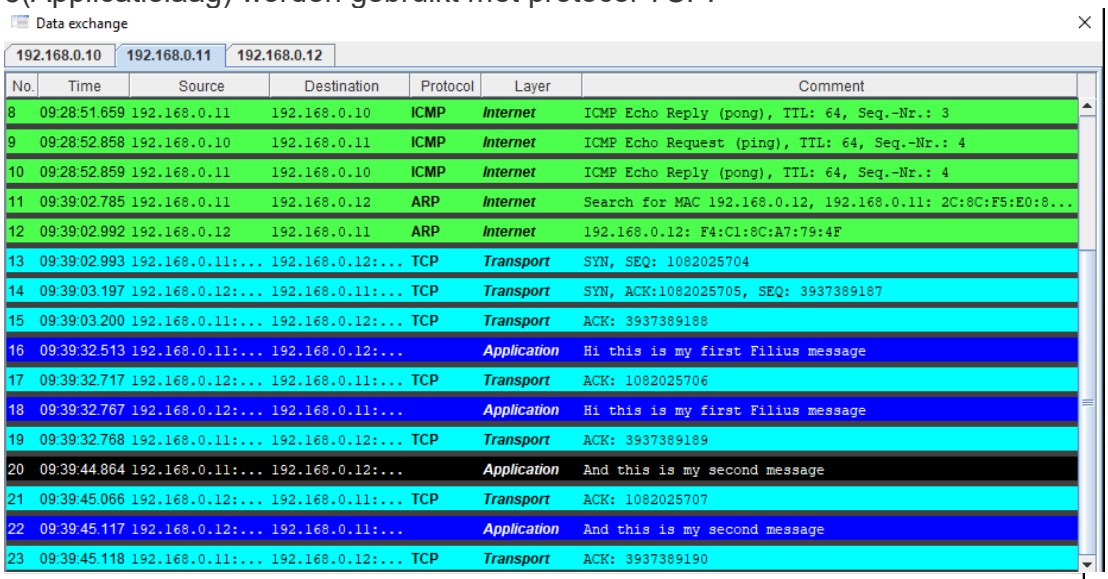
opdracht 1.4.1
Het is aangesloten.



opdracht 1.5.1
De IP-adressen horen bij laag 3(Netwerklaag).

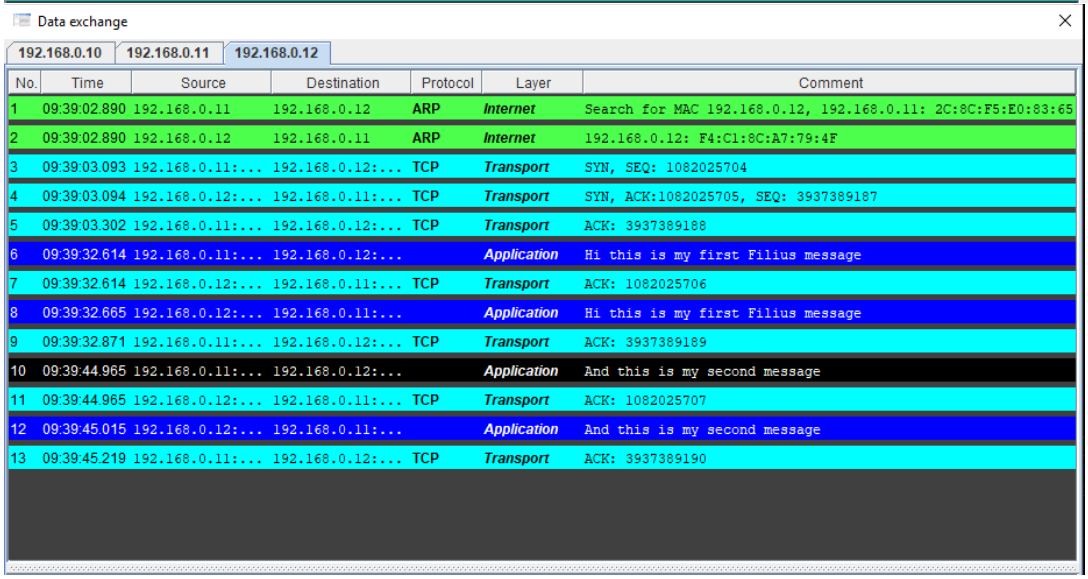
opdracht 1.6.1
Protocol ICMP wordt gebruikt. Het behoort tot laag 3(Netwerklaag)

opdracht 1.7.1
De applicatie stuurt het bericht heen en terug. De lagen 4(Transportlaag) en 5(Applicatielaag) worden gebruikt met protocol TCP.


Data exchange

192.168.0.10 | 192.168.0.11 | 192.168.0.12

No.	Time	Source	Destination	Protocol	Layer	Comment
8	09:28:51.659	192.168.0.11	192.168.0.10	ICMP	Internet	ICMP Echo Reply (pong), TTL: 64, Seq.-Nr.: 3
9	09:28:52.858	192.168.0.10	192.168.0.11	ICMP	Internet	ICMP Echo Request (ping), TTL: 64, Seq.-Nr.: 4
10	09:28:52.859	192.168.0.11	192.168.0.10	ICMP	Internet	ICMP Echo Reply (pong), TTL: 64, Seq.-Nr.: 4
11	09:39:02.785	192.168.0.11	192.168.0.12	ARP	Internet	Search for MAC 192.168.0.12, 192.168.0.11: 2C:8C:F5:E0:8...
12	09:39:02.992	192.168.0.12	192.168.0.11	ARP	Internet	192.168.0.12: F4:C1:8C:A7:79:4F
13	09:39:02.993	192.168.0.11:...	192.168.0.12:...	TCP	Transport	SYN, SEQ: 1082025704
14	09:39:03.197	192.168.0.12:...	192.168.0.11:...	TCP	Transport	SYN, ACK:1082025705, SEQ: 3937389187
15	09:39:03.200	192.168.0.11:...	192.168.0.12:...	TCP	Transport	ACK: 3937389188
16	09:39:32.513	192.168.0.11:...	192.168.0.12:...		Application	Hi this is my first Filius message
17	09:39:32.717	192.168.0.12:...	192.168.0.11:...	TCP	Transport	ACK: 1082025706
18	09:39:32.767	192.168.0.12:...	192.168.0.11:...		Application	Hi this is my first Filius message
19	09:39:32.768	192.168.0.11:...	192.168.0.12:...	TCP	Transport	ACK: 3937389189
20	09:39:44.864	192.168.0.11:...	192.168.0.12:...		Application	And this is my second message
21	09:39:45.066	192.168.0.12:...	192.168.0.11:...	TCP	Transport	ACK: 1082025707
22	09:39:45.117	192.168.0.12:...	192.168.0.11:...		Application	And this is my second message
23	09:39:45.118	192.168.0.11:...	192.168.0.12:...	TCP	Transport	ACK: 3937389190

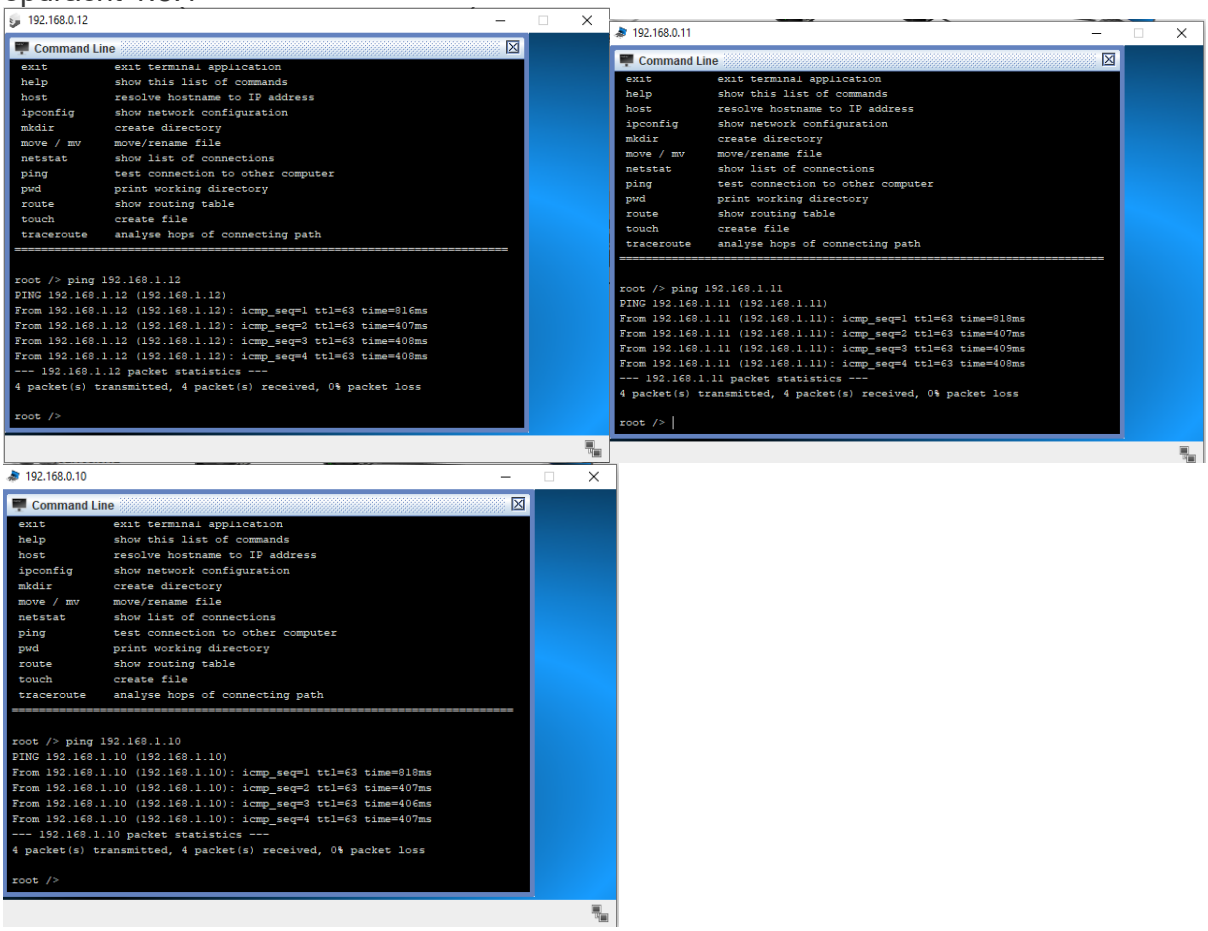

Data exchange

192.168.0.10 | 192.168.0.11 | 192.168.0.12

No.	Time	Source	Destination	Protocol	Layer	Comment
1	09:39:02.890	192.168.0.11	192.168.0.12	ARP	Internet	Search for MAC 192.168.0.12, 192.168.0.11: 2C:8C:F5:E0:83:65
2	09:39:02.890	192.168.0.12	192.168.0.11	ARP	Internet	192.168.0.12: F4:C1:8C:A7:79:4F
3	09:39:03.093	192.168.0.11:...	192.168.0.12:...	TCP	Transport	SYN, SEQ: 1082025704
4	09:39:03.094	192.168.0.12:...	192.168.0.11:...	TCP	Transport	SYN, ACK:1082025705, SEQ: 3937389187
5	09:39:03.302	192.168.0.11:...	192.168.0.12:...	TCP	Transport	ACK: 3937389188
6	09:39:32.614	192.168.0.11:...	192.168.0.12:...		Application	Hi this is my first Filius message
7	09:39:32.614	192.168.0.12:...	192.168.0.11:...	TCP	Transport	ACK: 1082025706
8	09:39:32.665	192.168.0.12:...	192.168.0.11:...		Application	Hi this is my first Filius message
9	09:39:32.871	192.168.0.11:...	192.168.0.12:...	TCP	Transport	ACK: 3937389189
10	09:39:44.965	192.168.0.11:...	192.168.0.12:...		Application	And this is my second message
11	09:39:44.965	192.168.0.12:...	192.168.0.11:...	TCP	Transport	ACK: 1082025707
12	09:39:45.015	192.168.0.12:...	192.168.0.11:...		Application	And this is my second message
13	09:39:45.219	192.168.0.11:...	192.168.0.12:...	TCP	Transport	ACK: 3937389190

opdracht 1.7.2
Een poort is ook bekend als gate, of port. Er zijn Hardwarepoorten: LPT, COM, USB, PS/2, Toetsenbord, Joystick/MIDI, VGA, HDMI, DisplayPort etc.
Ook zijn er netwerkpoorten, een netwerkpoort is een nummer dat aan gegevens in het TCP/IP-protocol wordt gehangen, naast het IP-adres. Het poortnummer wordt door het ontvangende systeem gebruikt om te bepalen voor welk programma de gegevens zijn bestemd.
En als laatste, een I/O(machine)-poort. Intel-processoren maken gebruik van het concept I/O(In/Out) poort om te bepalen welke hardware moet worden aangesproken.
De hardwarepoorten die meestal niet meer worden gebruikt zijn LPT, COM, PS/2, Toetsenbordport en VGA.

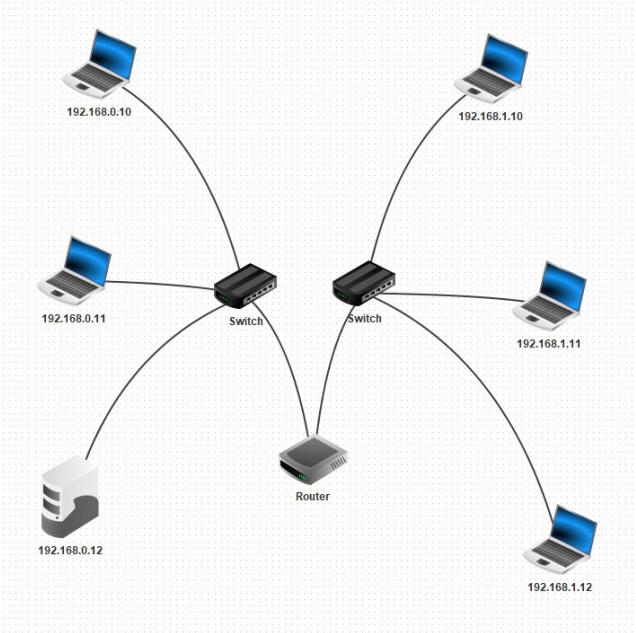
opdracht 1.8.1



opdracht 1.8.2

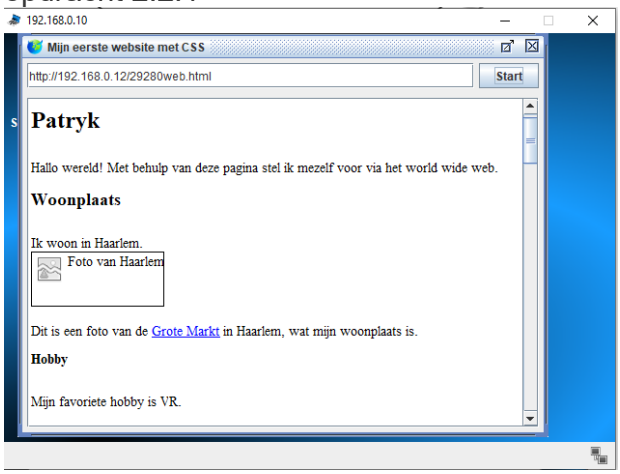
Een gateway is een ip adres dat een computer toegang geeft tot een ander netwerk

Het netwerk ziet er zo uit tot nu toe:

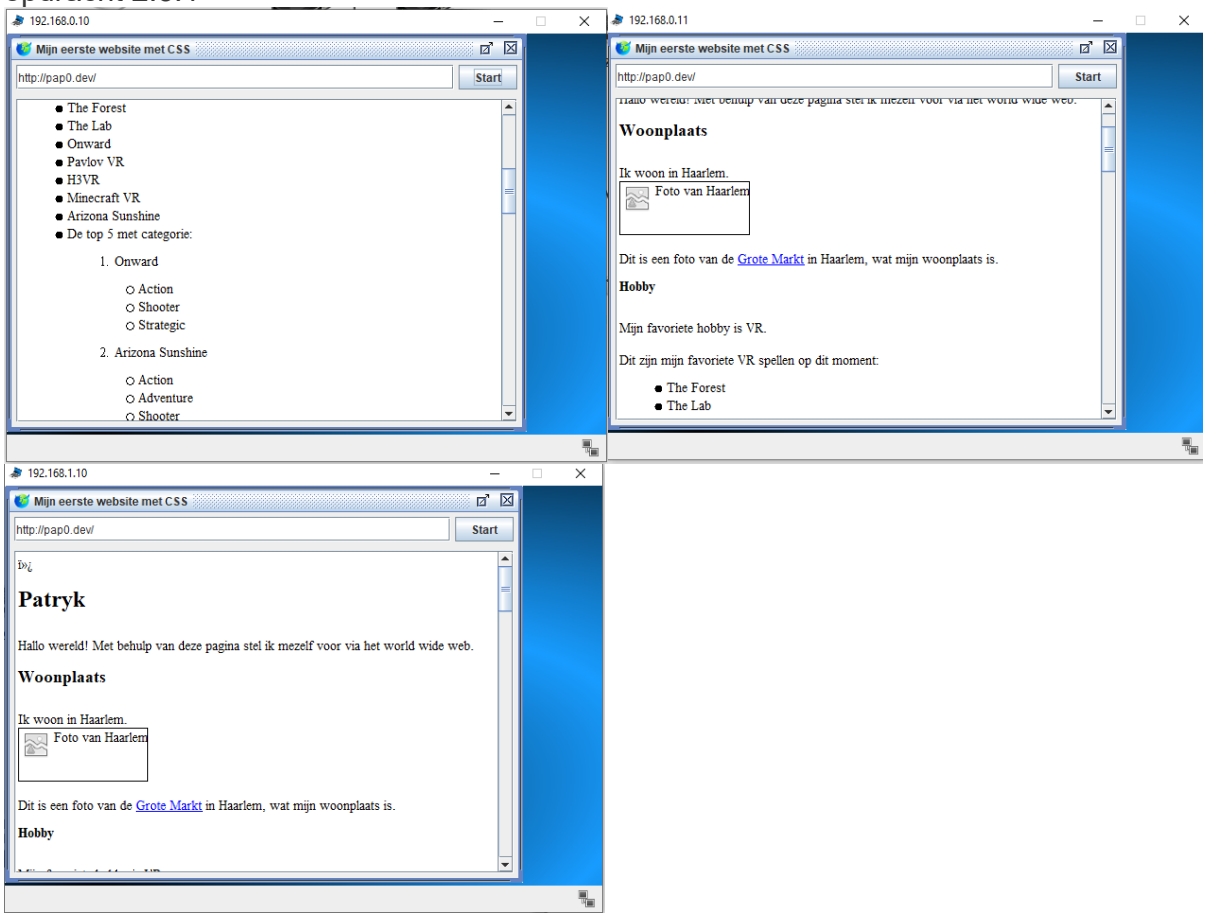


Deel 2

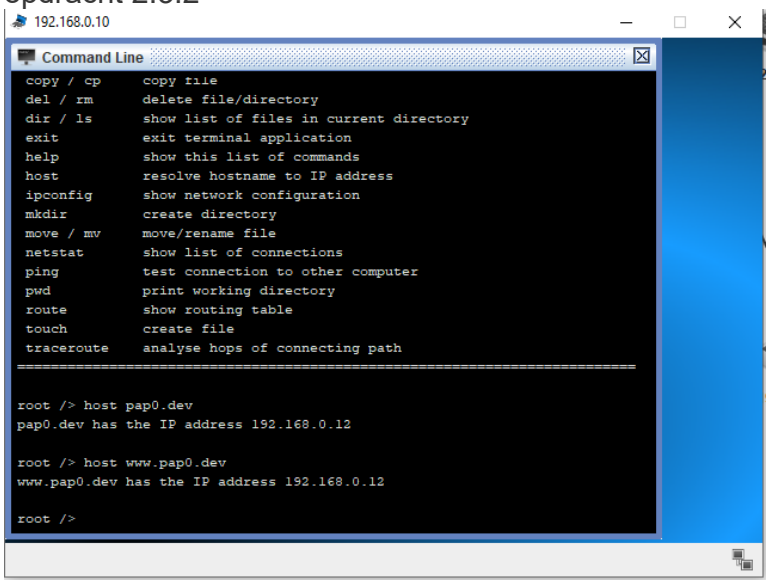
opdracht 2.2.1



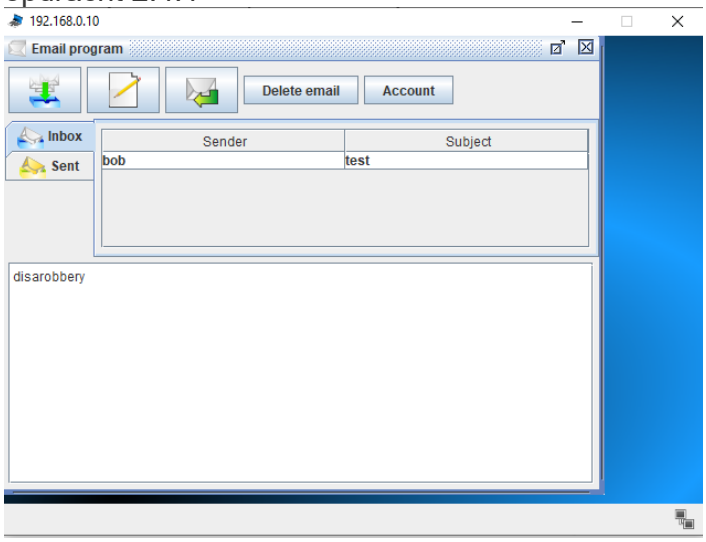
opdracht 2.3.1



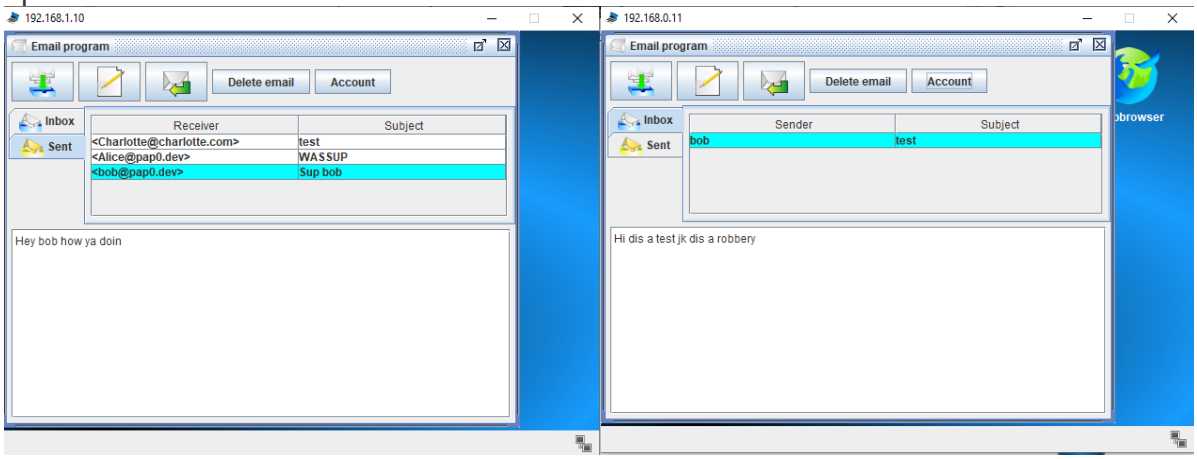
opdracht 2.3.2



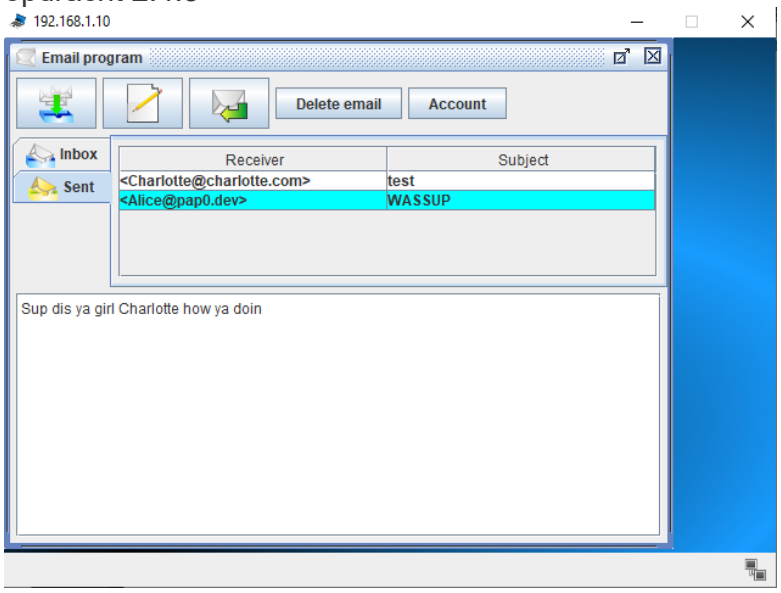
opdracht 2.4.1



opdracht 2.4.2



opdracht 2.4.3



Het netwerk ziet er nu zo uit: