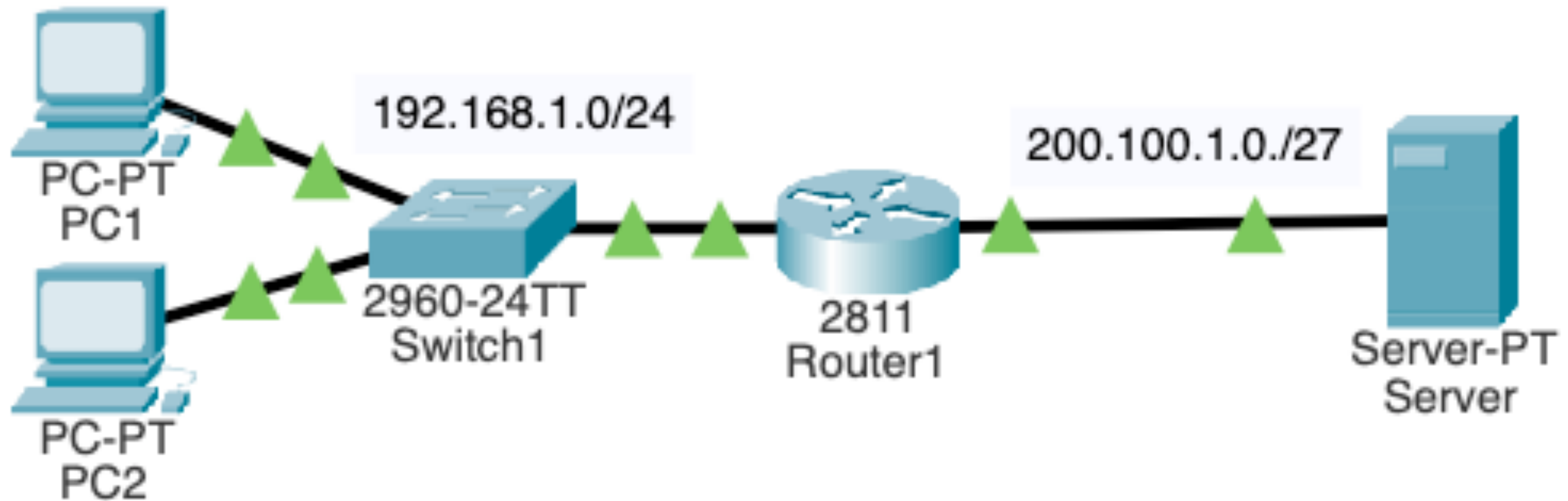


Computer Networks

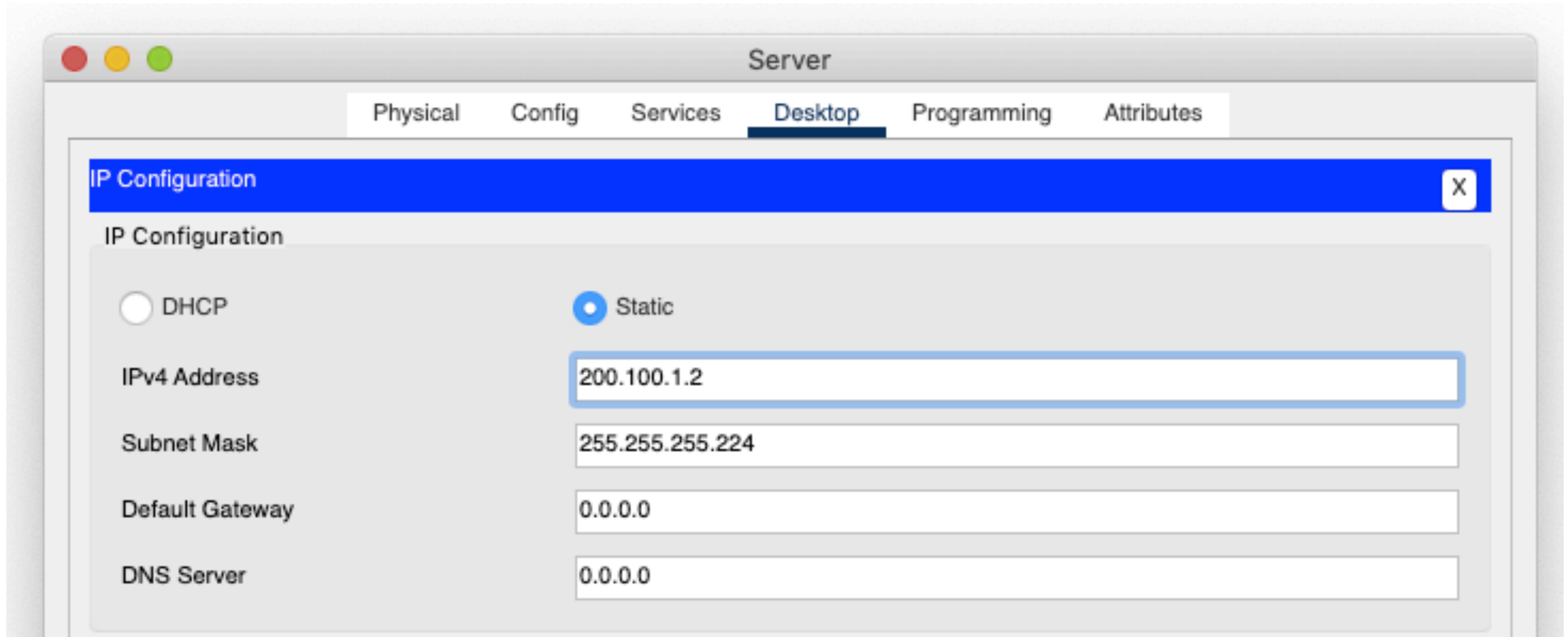
week 15. NAT.

NAT (Network address translation)

In this lab you need to give an access to Internet for users. You have 1 Router and 1 Switch, PCs (as many as you want, but not less than two). You have only one public IP address (**200.100.1.5/27**)



Server - do not configure a default gateway



Task 1. Configure Static NAT

1. You have to select inside and outside interfaces on Router.

```
When user sends a packet to someone in Internet:  
Inside interface – a packet comes in to Router  
Outside interface – a packet comes out from Router
```

```
Router(config)#interface fastEthernet 0/0  
Router(config)#ip nat inside  
Router(config)#exit
```

```
Router(config)interface fastEthernet 0/1  
Router(config)#ip nat outside  
Router(config)#exit
```

2. **Static NAT**

```
Router#ip nat inside source static 192.168.1.X 200.100.1.X
```

Task 2. Configure Dynamic NAT

This kind of NAT dynamically assigns IP address to User from the pool of address.

Create a pool of IP addresses. In our case the pool has only 1 IP address :)

```
Router#ip nat pool Innopolis 200.100.1.5 200.100.1.5 netmask 255.255.255.255
```

Create an access list that tells Router which user IP address to translate

```
Router# access-list 1 permit 192.168.1.0 0.0.0.255
```

Create NAT rule

```
Router# ip nat inside source list 1 pool Innopolis
```

Task 3. Configure **PAT** (remove the previous command)

```
Router# ip nat inside source list 1 pool Innopolis overload
```

Useful commands

```
Router#show ip nat translations
```

```
Router#show ip nat statistics
```