

NAT

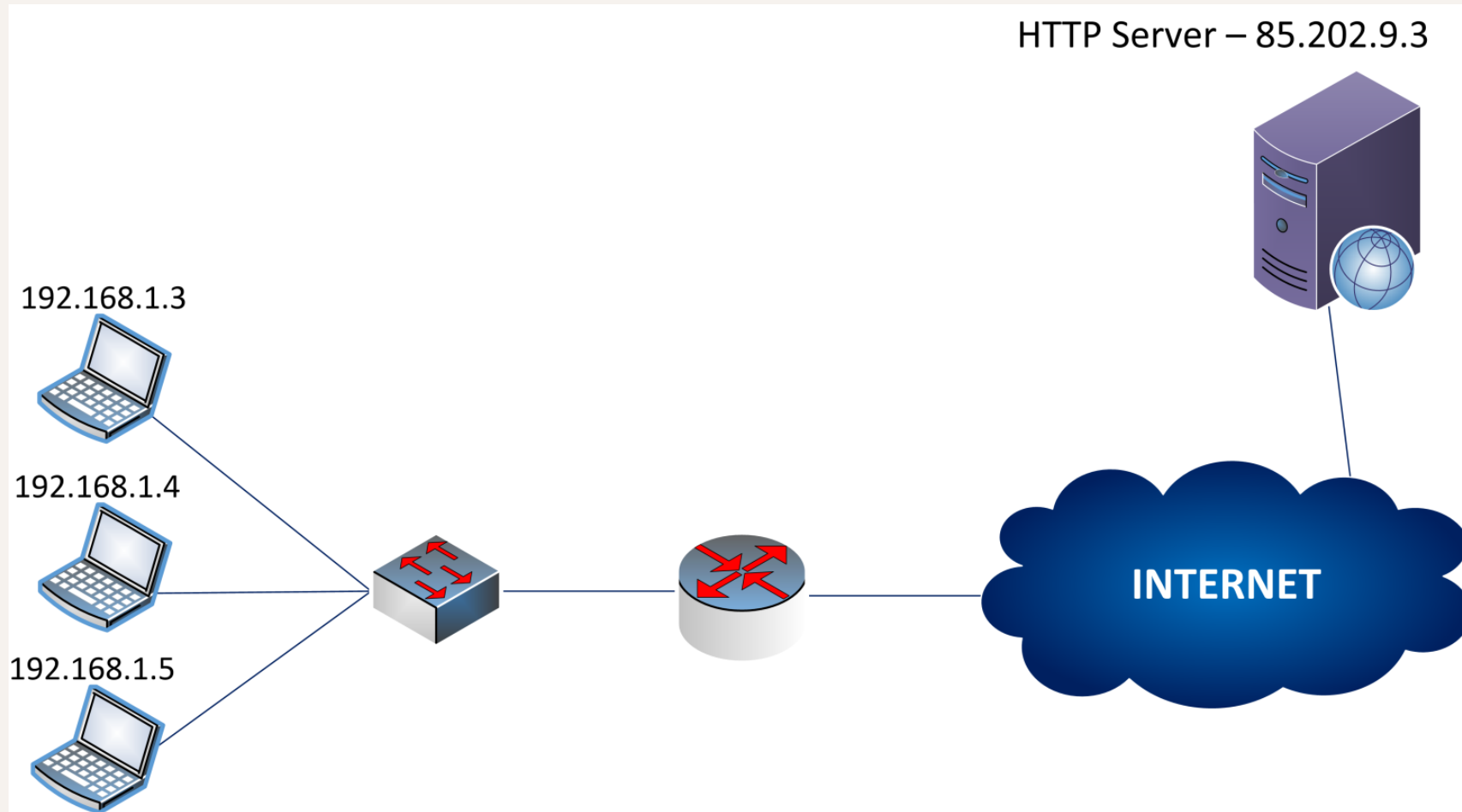
Network Address Translation

CyberQuince

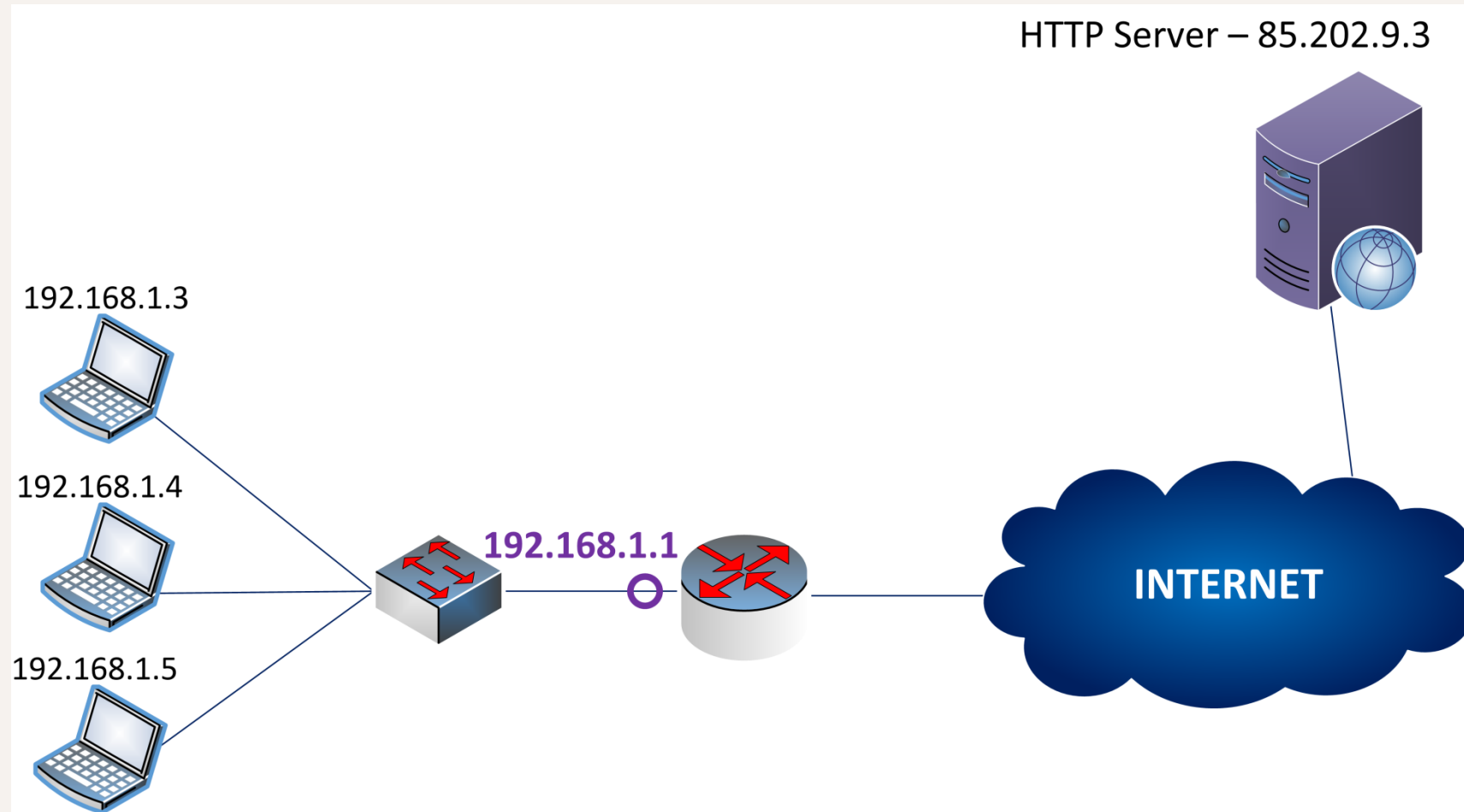
Network Address Translation (NAT)

Network Address Translation is a way to map private IPs into public IPs and vice versa. It's used at network edge – on routers, firewalls, or other network devices.

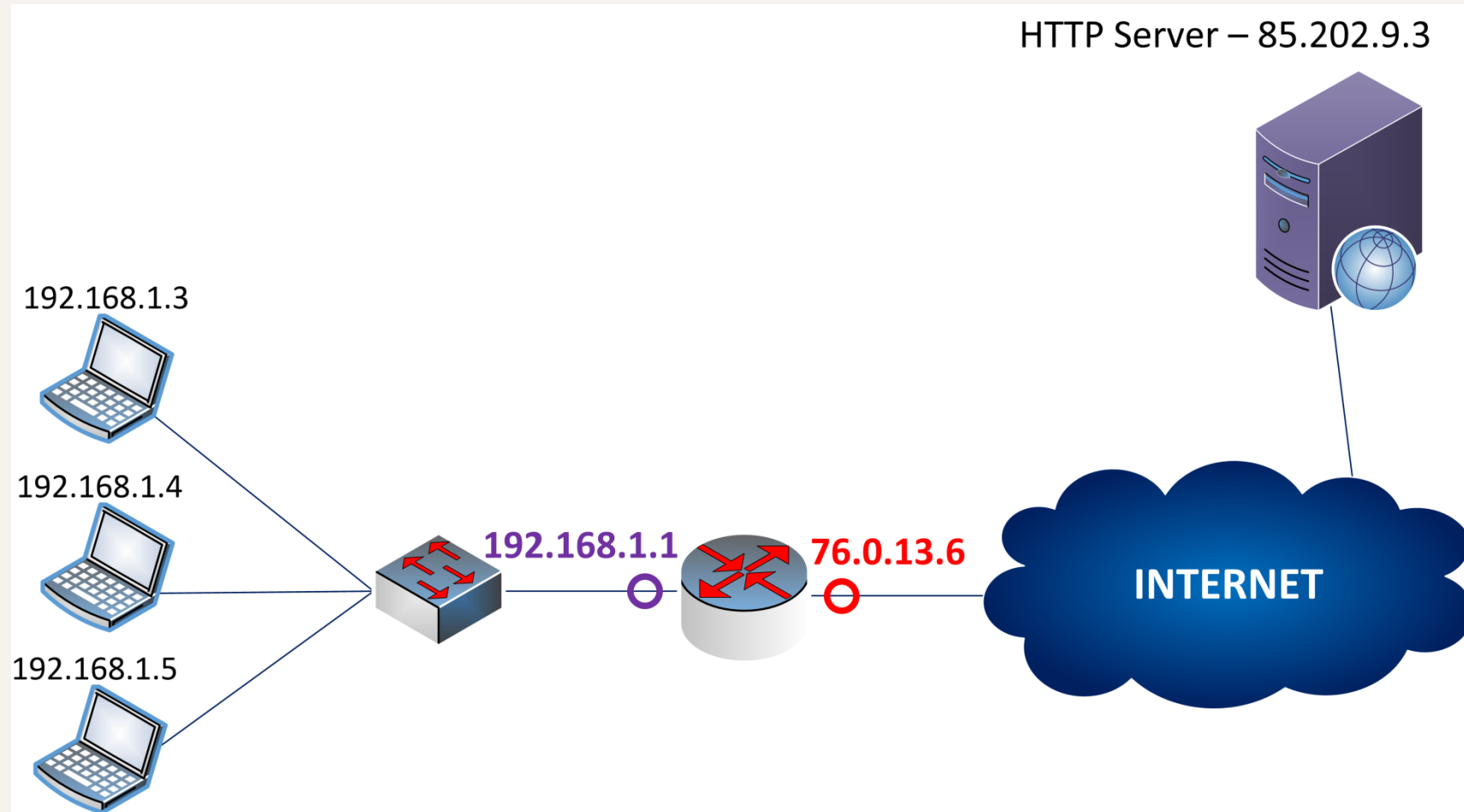
Network Address Translation (NAT)



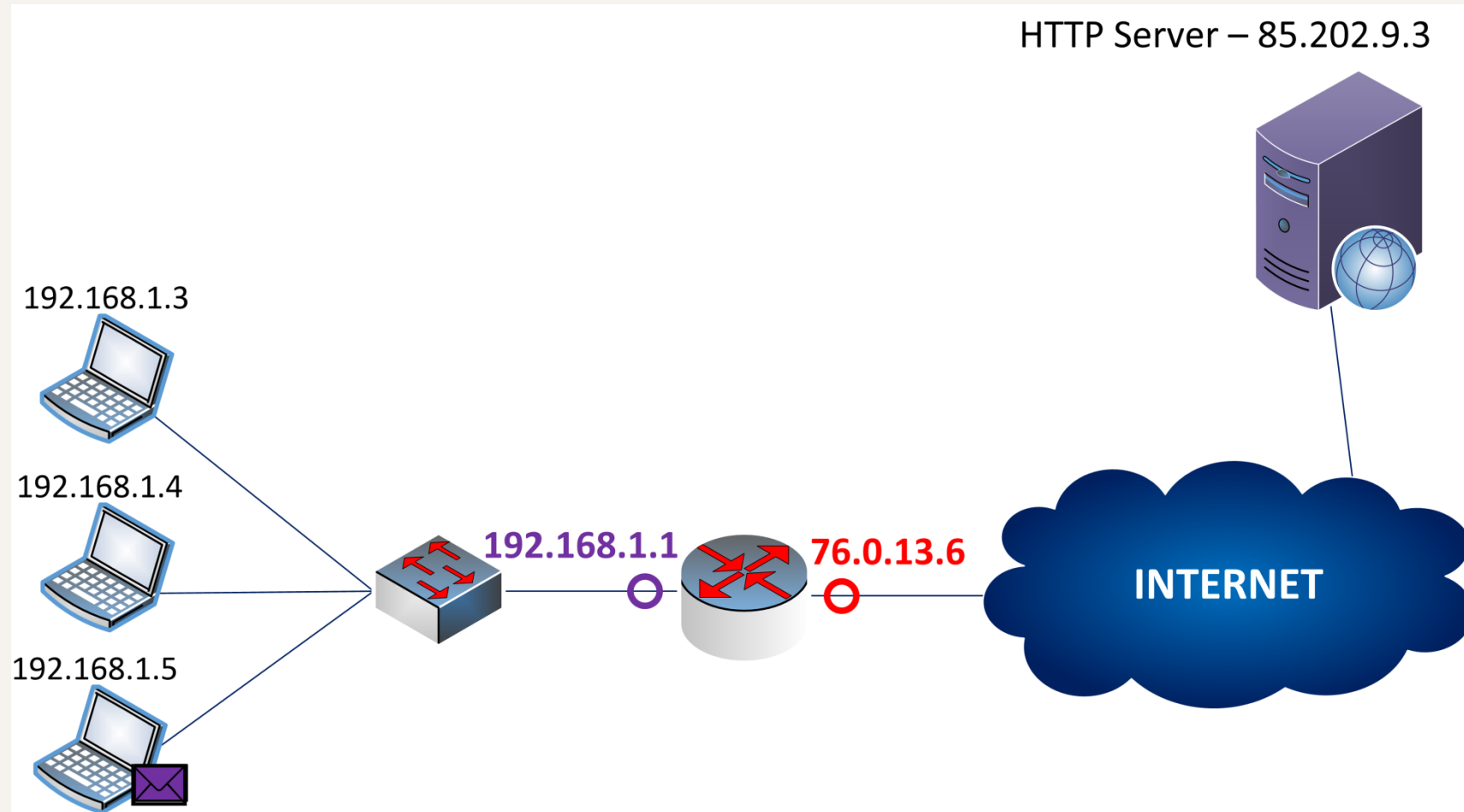
Network Address Translation (NAT)



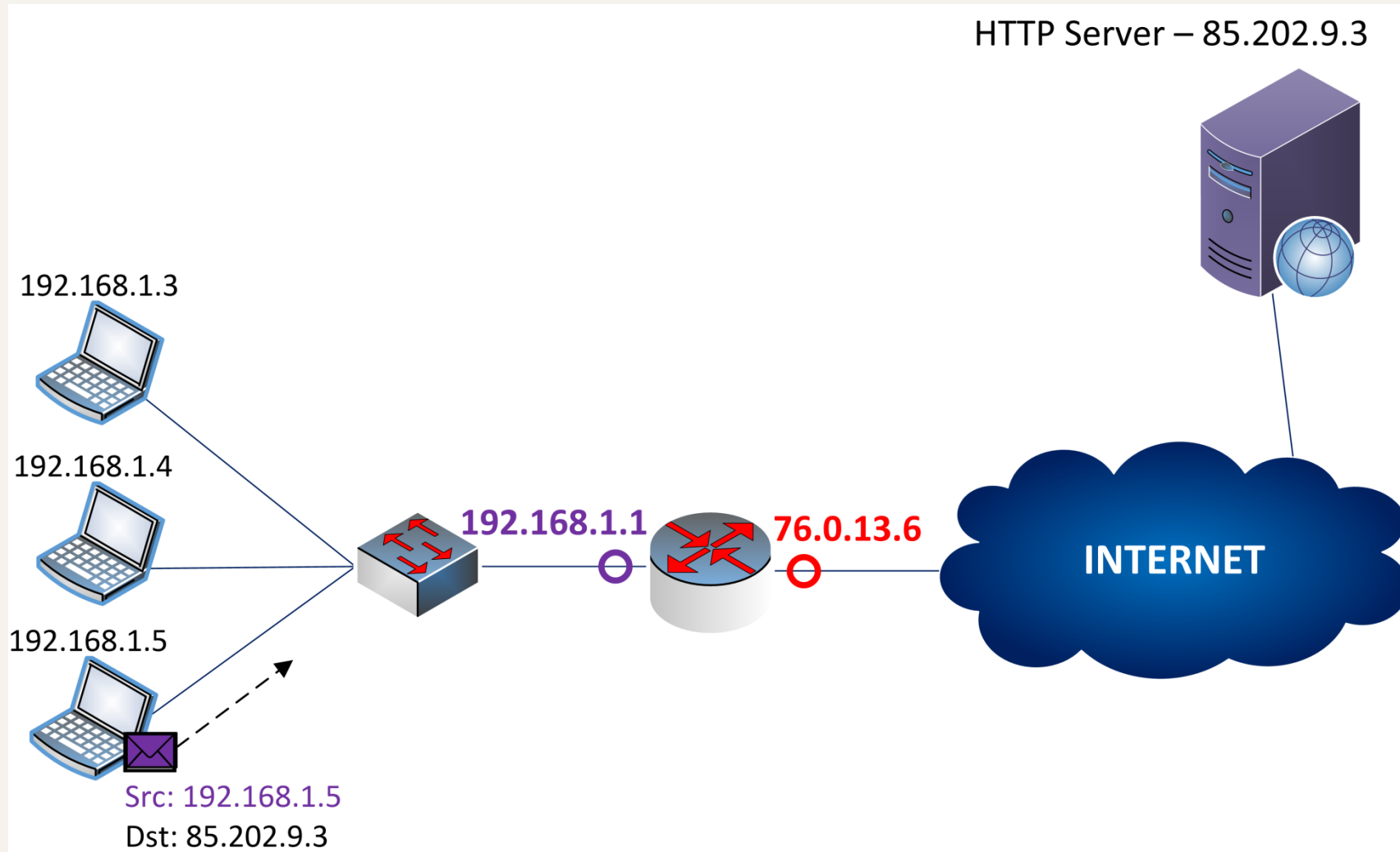
Network Address Translation (NAT)



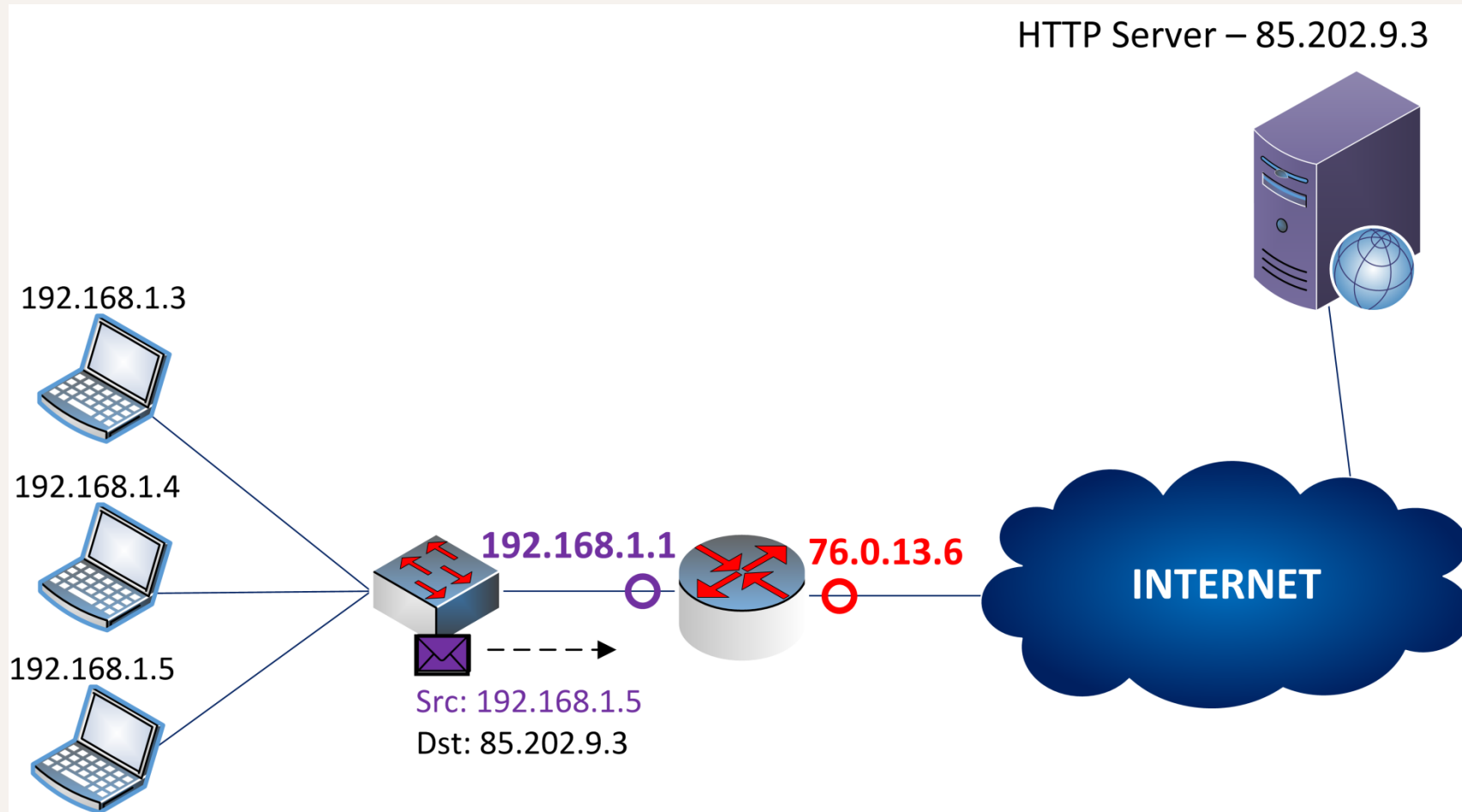
Network Address Translation (NAT)



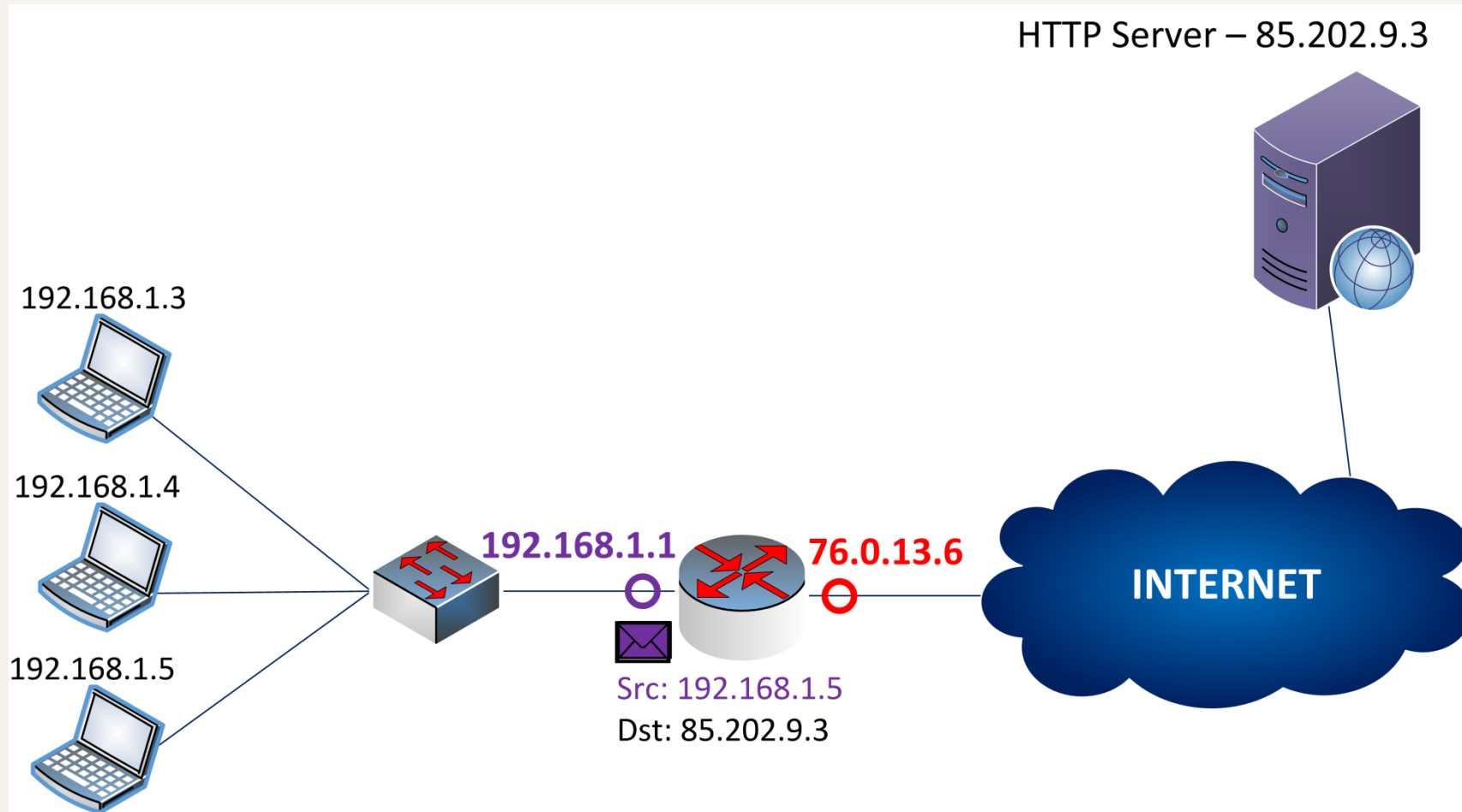
Network Address Translation (NAT)



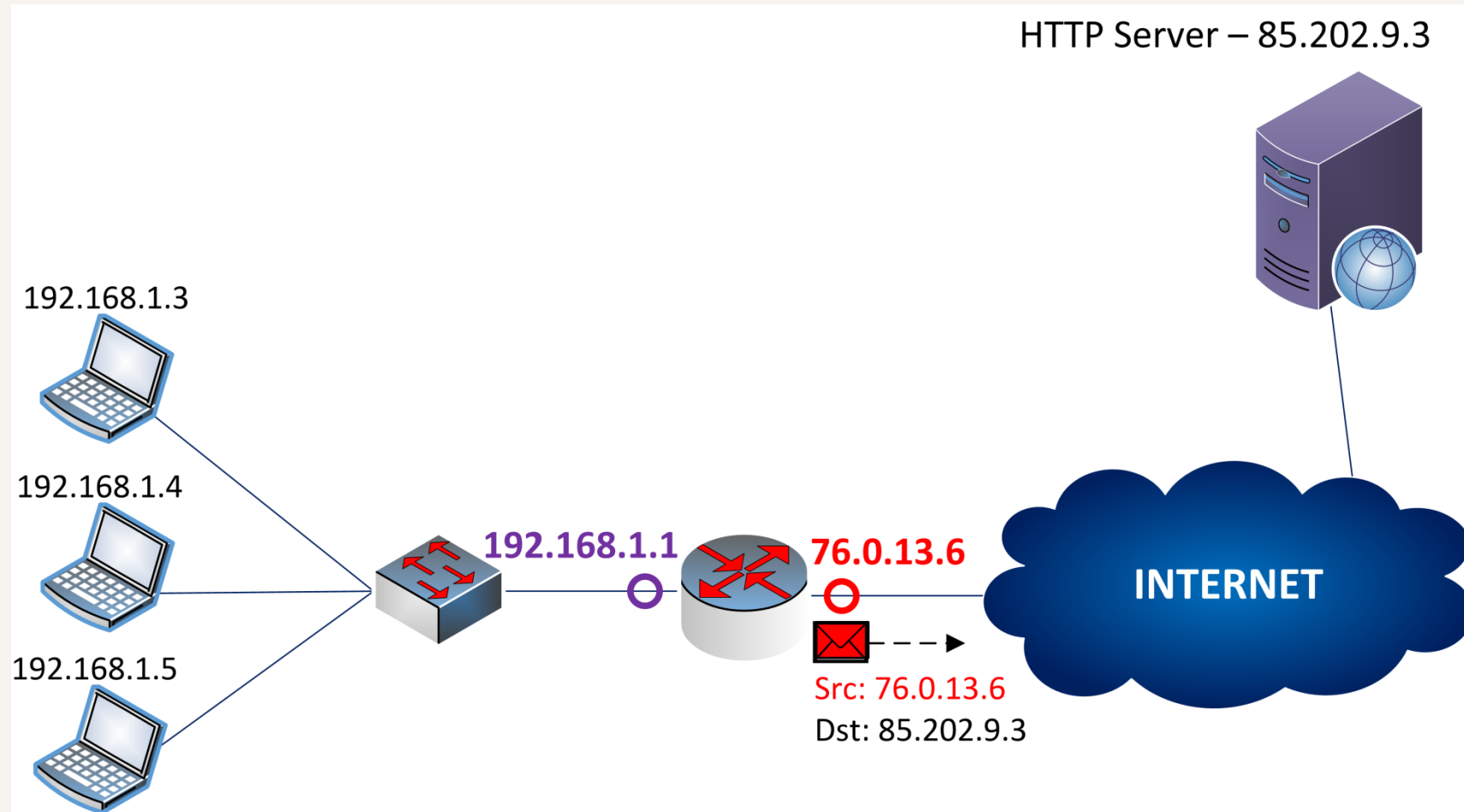
Network Address Translation (NAT)



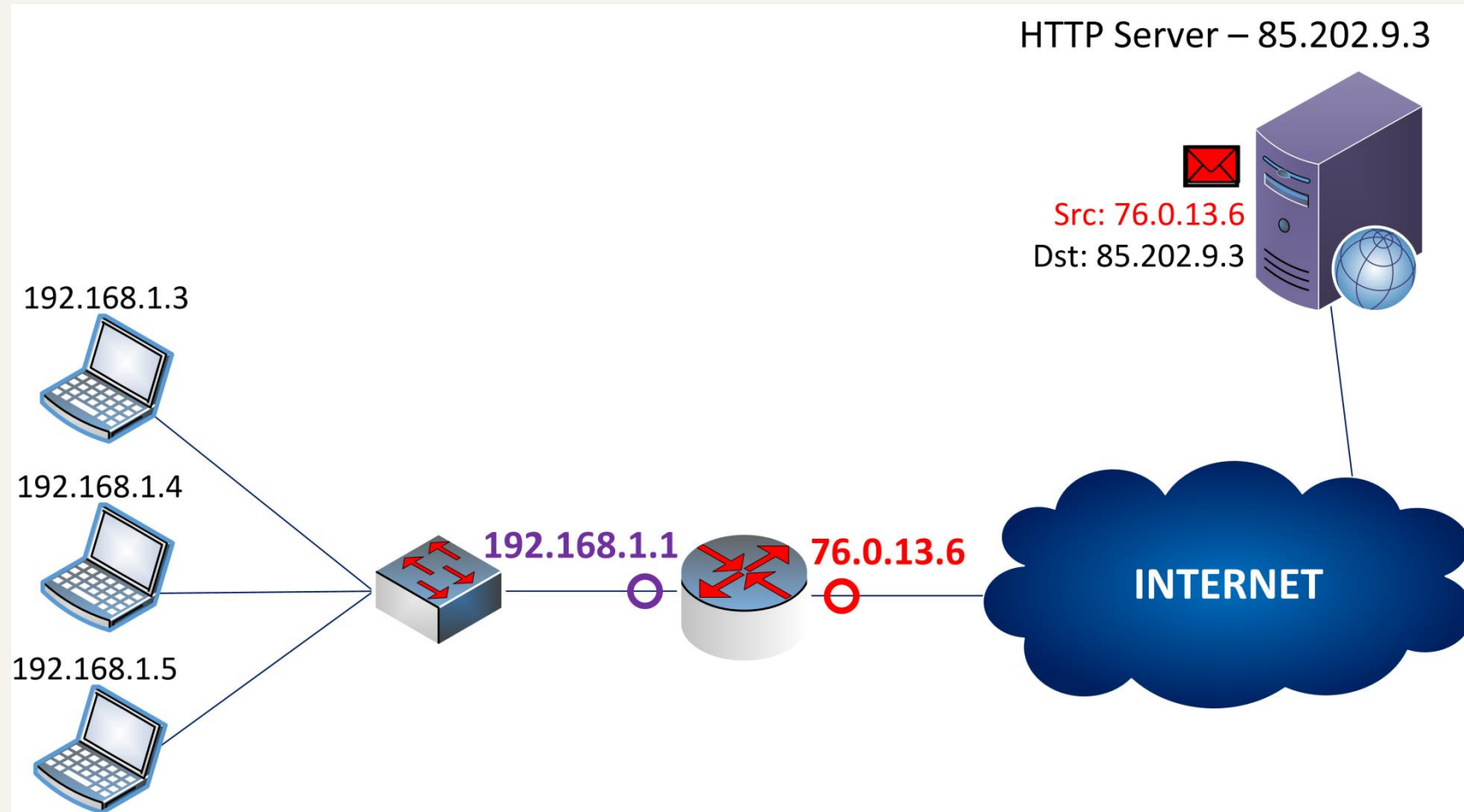
Network Address Translation (NAT)



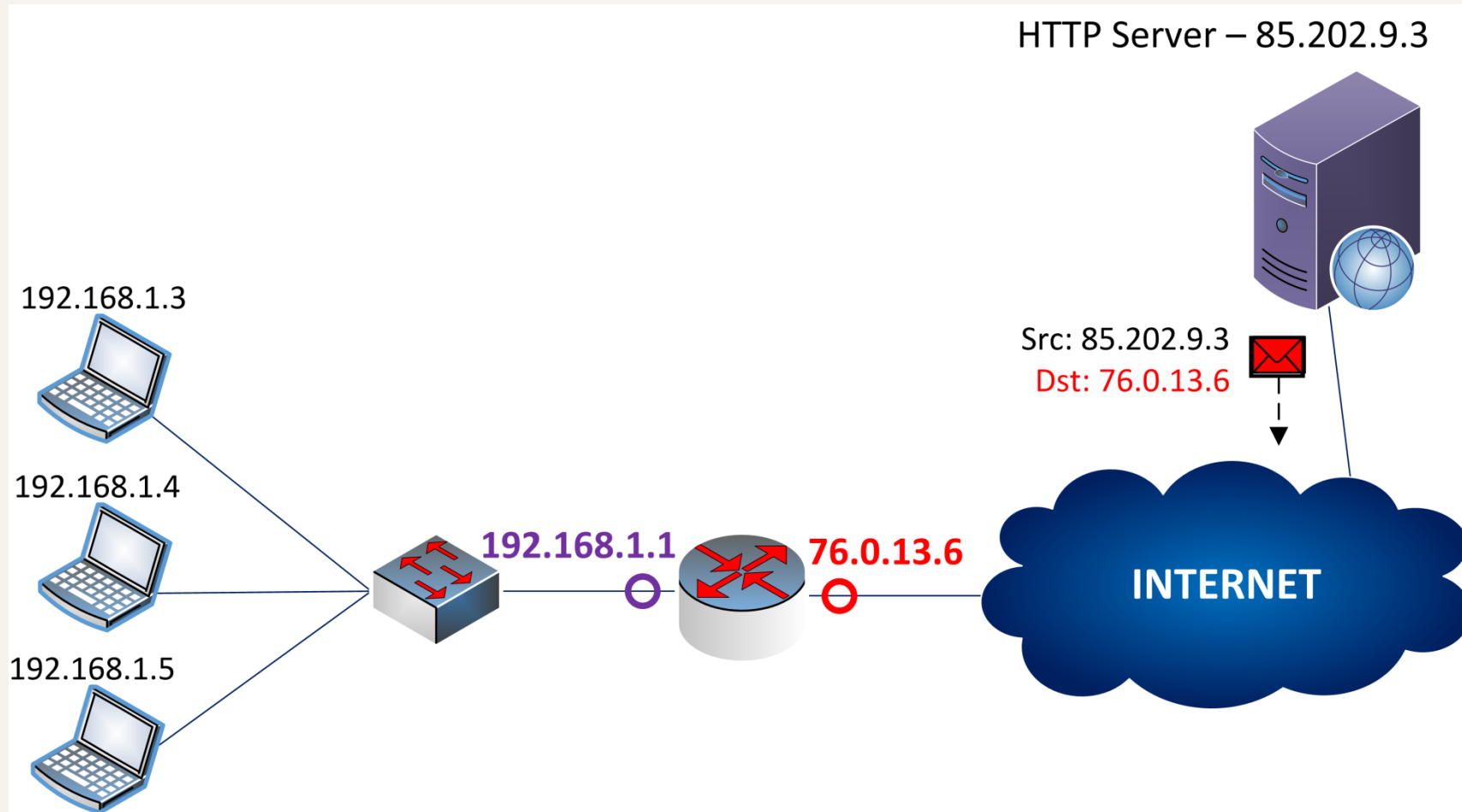
Network Address Translation (NAT)



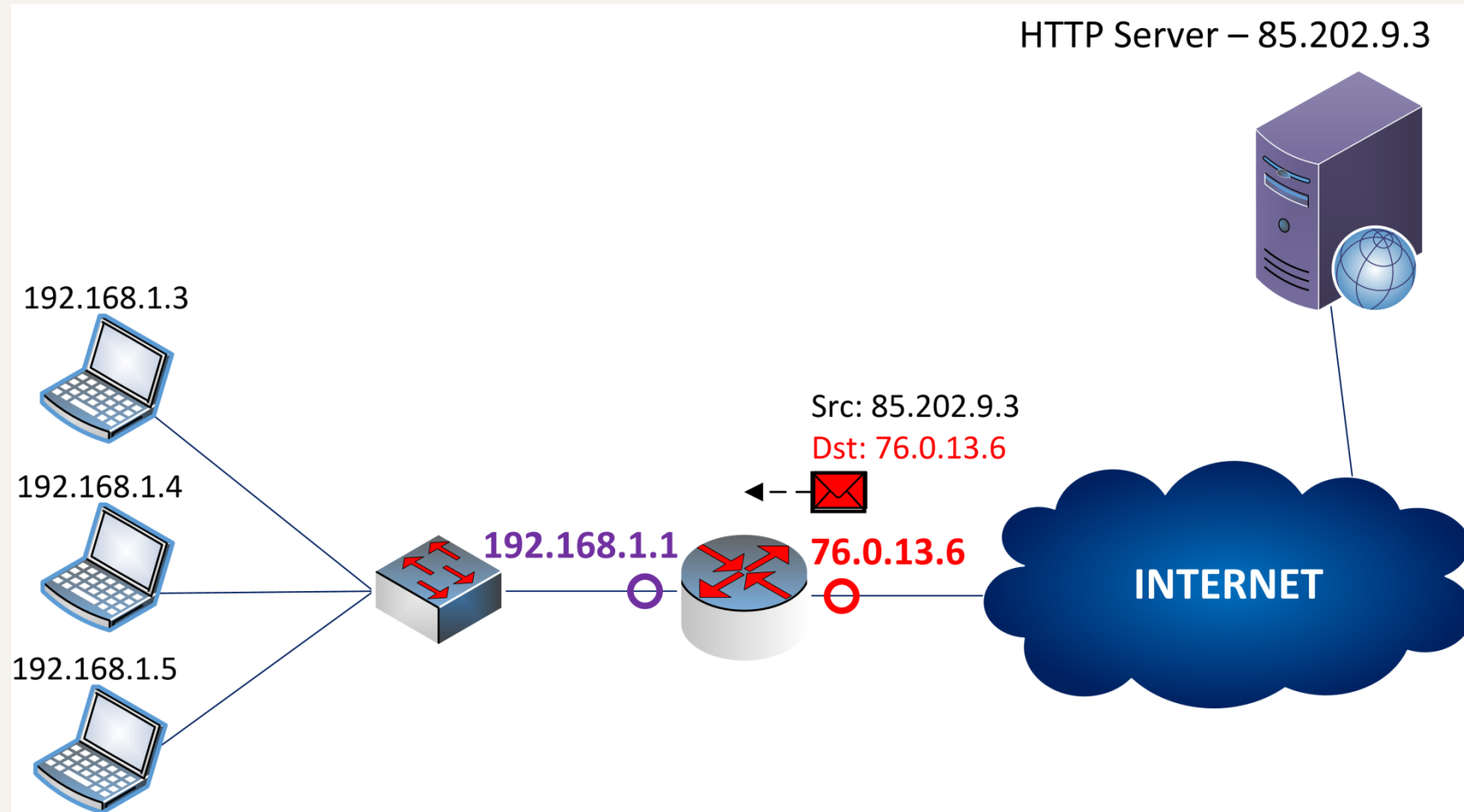
Network Address Translation (NAT)



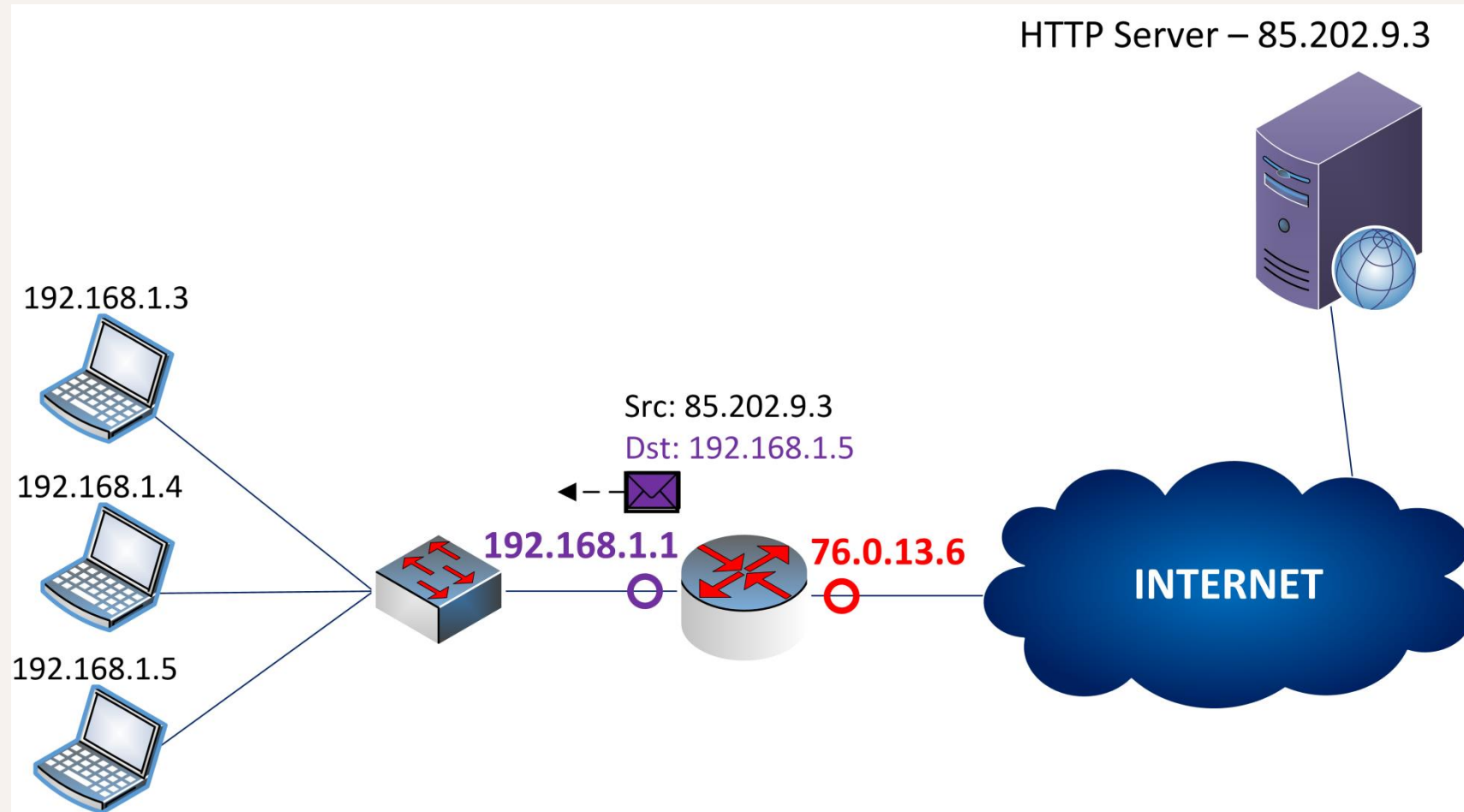
Network Address Translation (NAT)



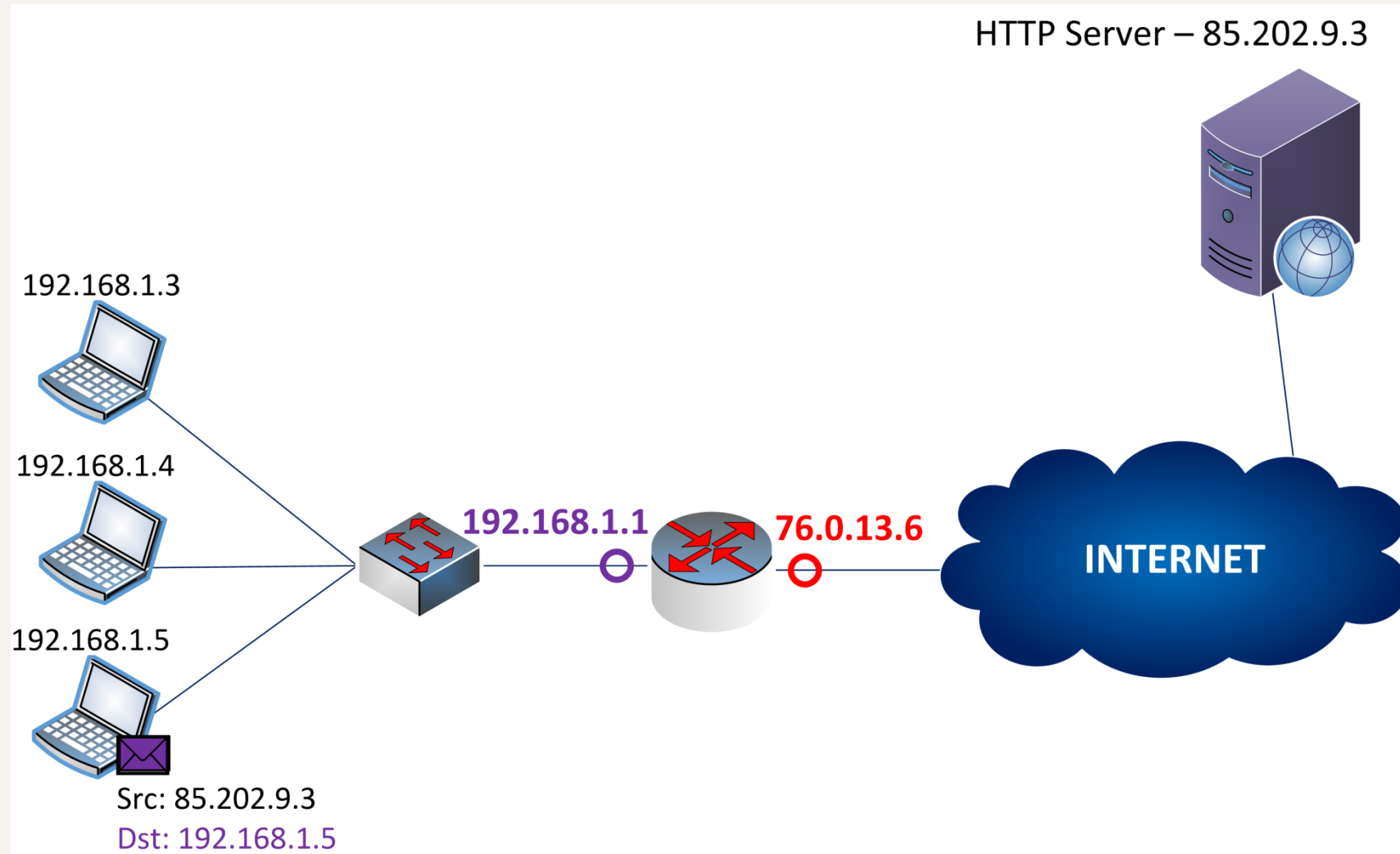
Network Address Translation (NAT)



Network Address Translation (NAT)



Network Address Translation (NAT)

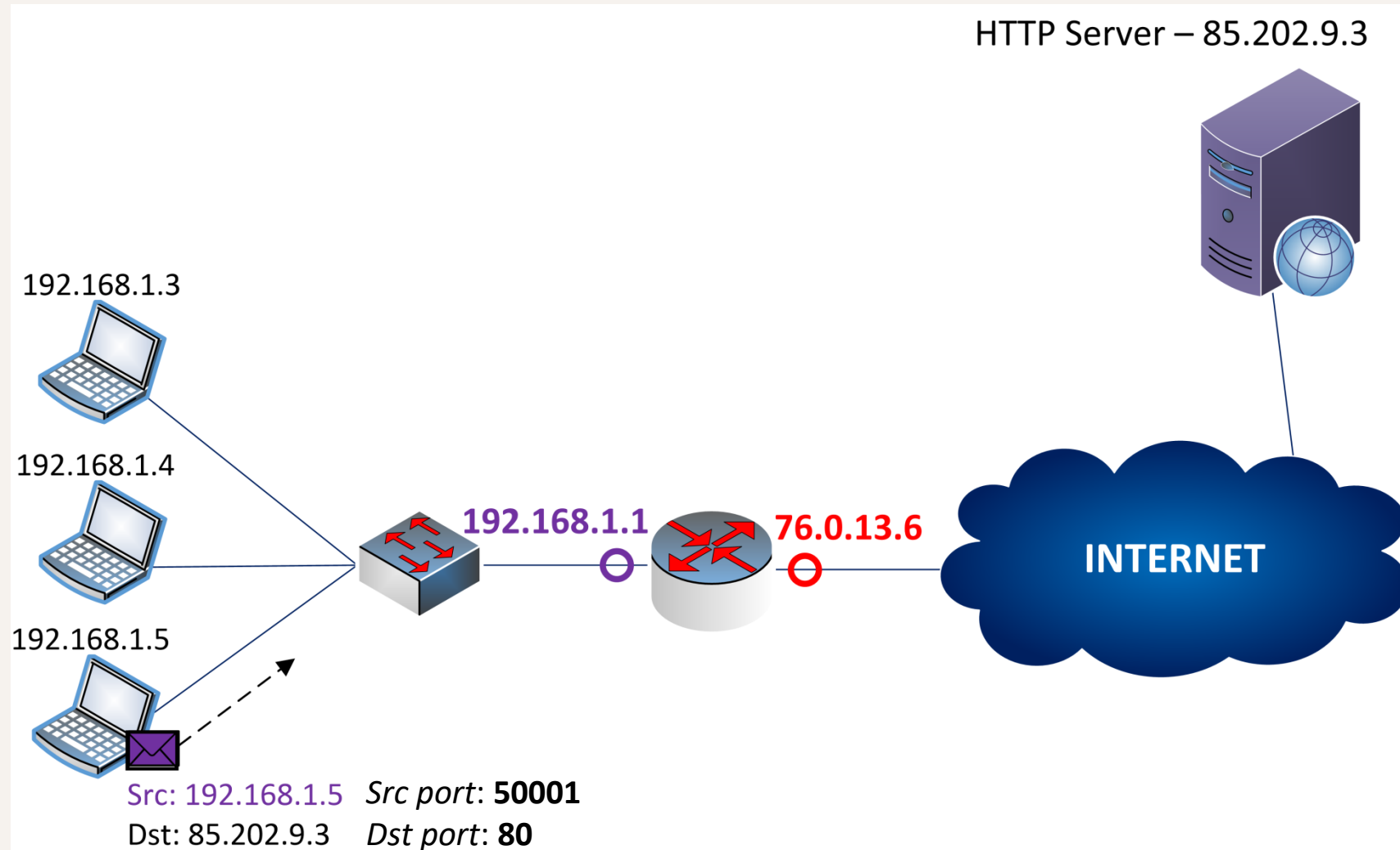


NAT

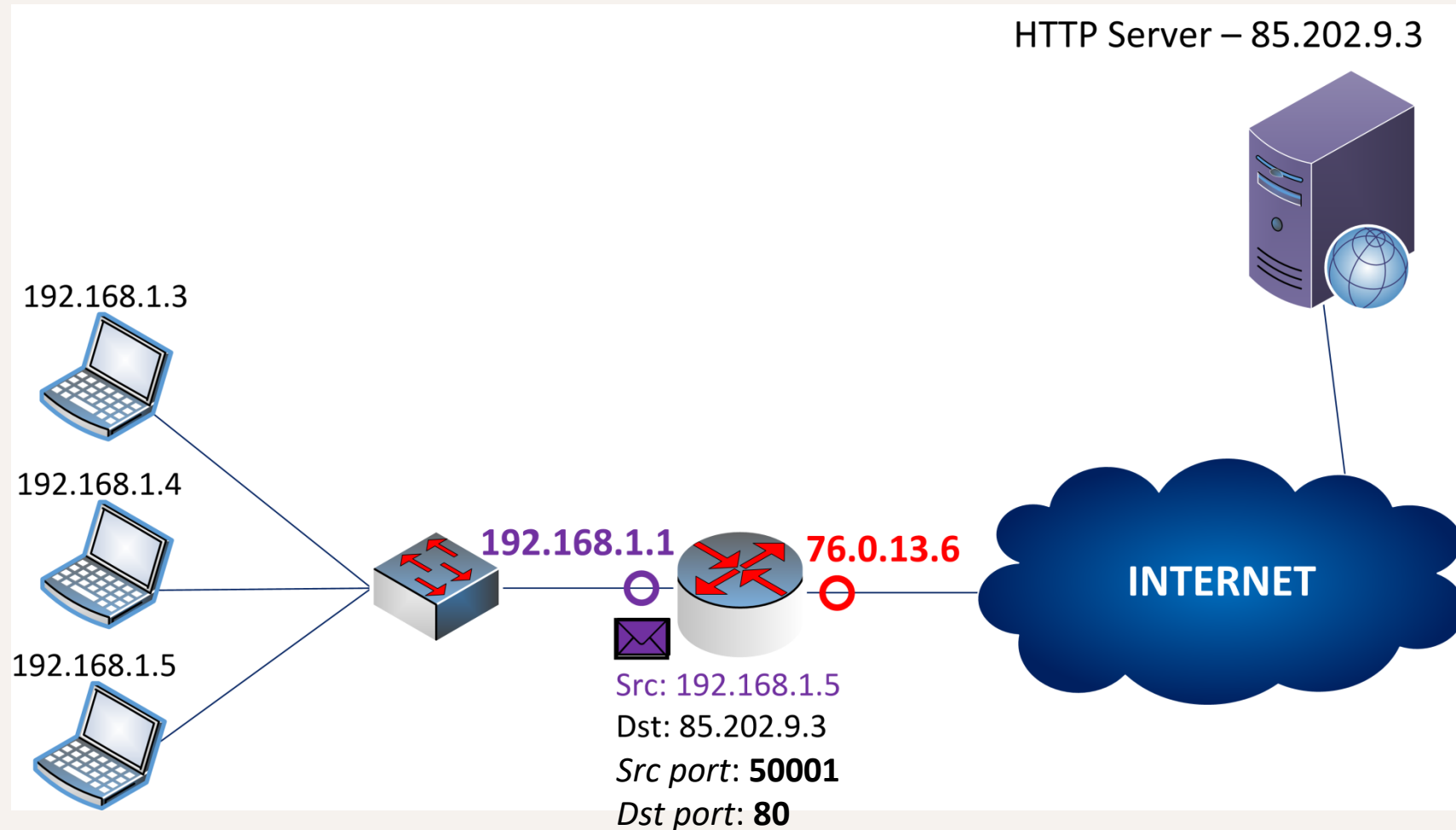
There are two main NAT types:

- Static
- Dynamic (overloading, PAT)

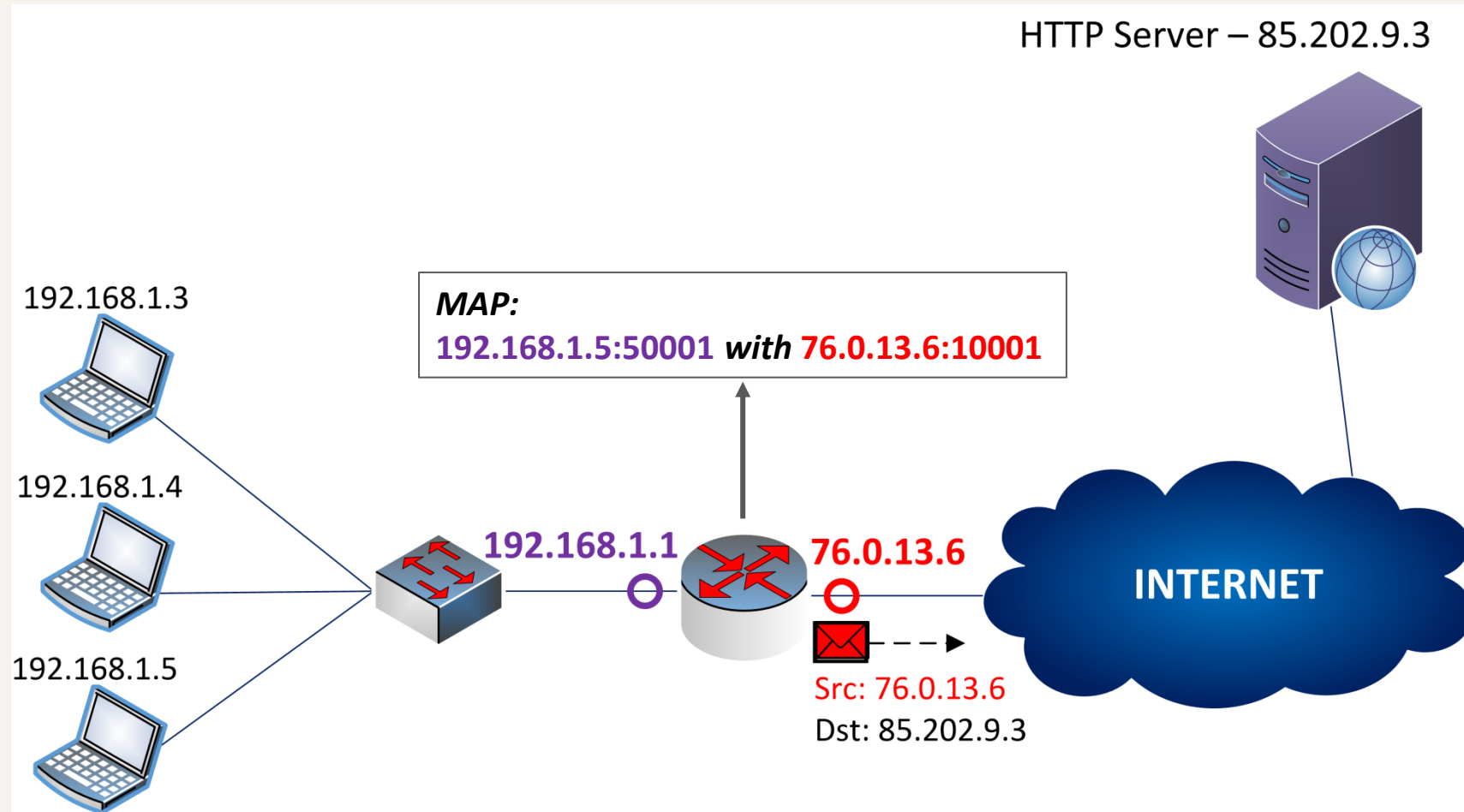
Network Address Translation (NAT)



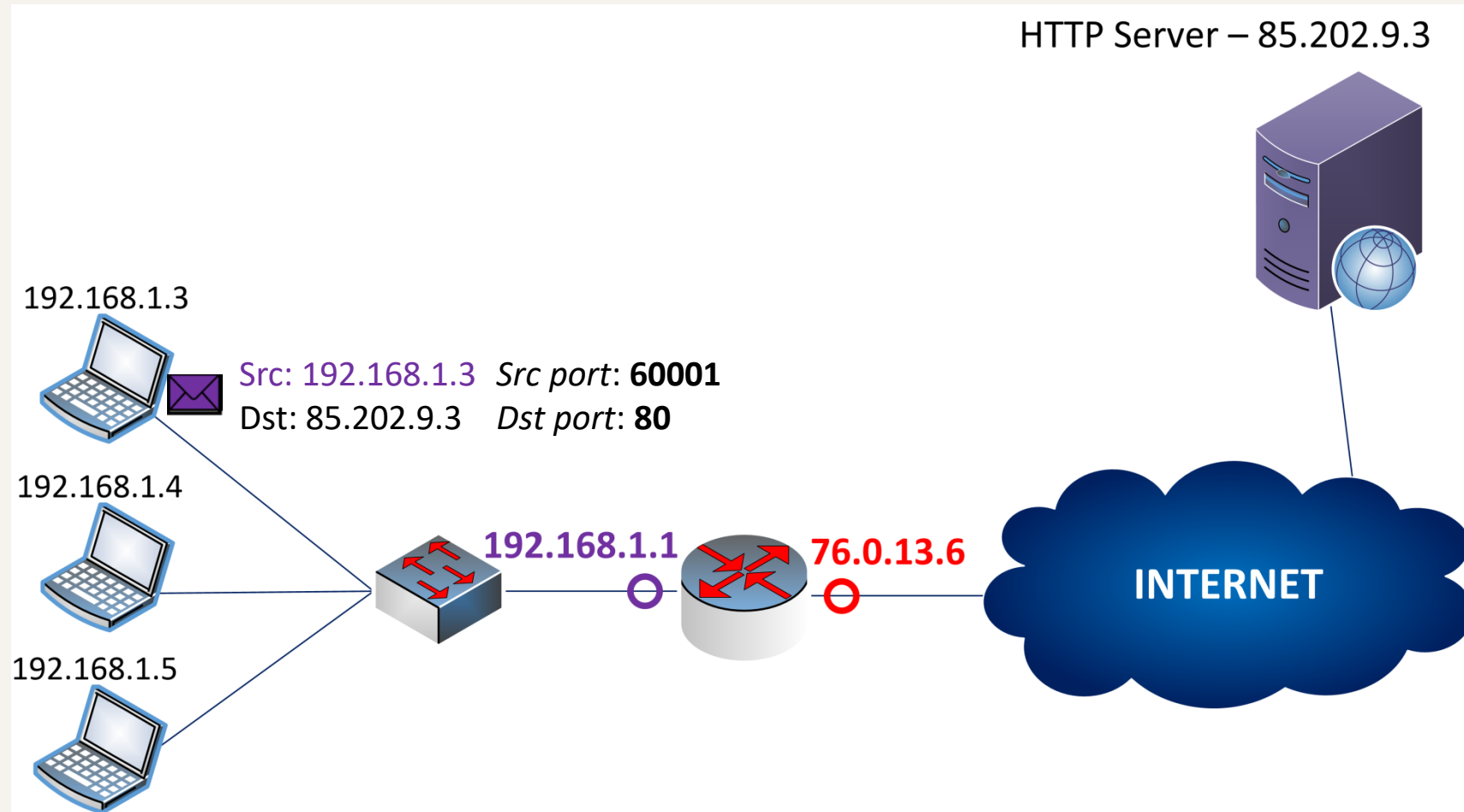
Network Address Translation (NAT)



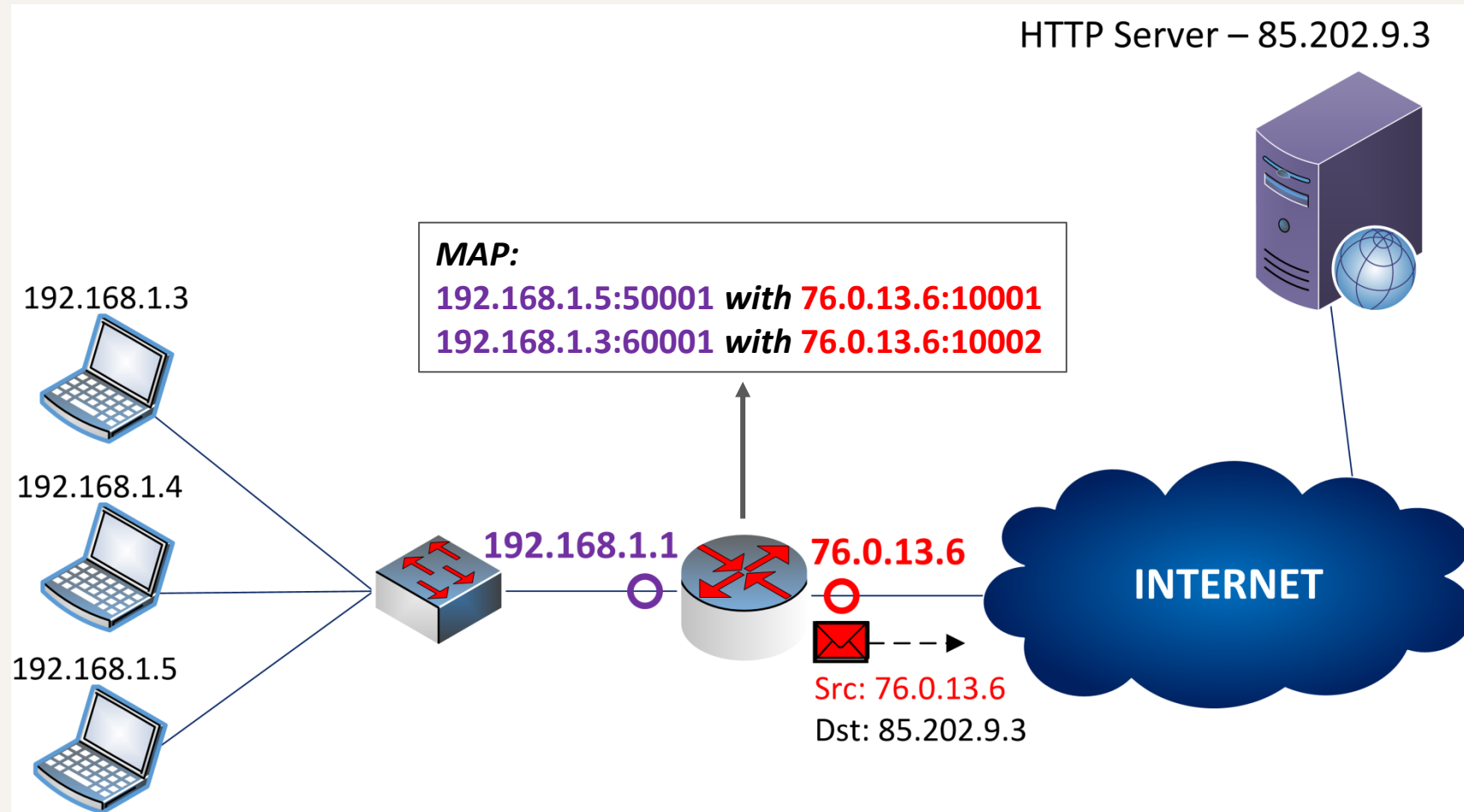
Network Address Translation (NAT)



Network Address Translation (NAT)



Network Address Translation (NAT)



Static Network Address Translation

When using static NAT, we translate one private IP address into one public IP address. This is usually needed when a LAN device needs to be accessed from the outside.

Static Network Address Translation

When using static NAT, we translate one private IP address into one public IP address. This is usually needed when a LAN device needs to be accessed from the outside.

```
R(config)# ip nat inside source static 192.168.0.1 217.3.250.6
```

Static Network Address Translation

When using static NAT, we translate one private IP address into one public IP address. This is usually needed when a LAN device needs to be accessed from the outside.

```
R(config)# ip nat inside source static 192.168.0.1 217.3.250.6
```



private



public

Dynamic Network Address Translation

When configuring dynamic NAT, we need to specify a range of addresses to be translated.

Dynamic Network Address Translation

When configuring dynamic NAT, we need to specify a range of addresses to be translated.

```
R(config)#ip access-list standard 1
```

```
R(config-std-nacl)#permit 192.168.1.0 0.0.0.255
```

Dynamic Network Address Translation

When configuring dynamic NAT, we need to specify a range of addresses to be translated.

```
R(config)#ip access-list standard 1
```

```
R(config-std-nacl)#permit 192.168.1.0 0.0.0.255
```

```
R(config)#ip nat inside source list 1 interface F0/0 overload
```

NAT Configuration: Interfaces

```
R(config-if)# ip nat inside
```

```
R(config-if)# ip nat outside
```

NAT

Network Address Translation

CyberQuince