

6 NAT for IPv4

6.1 NAT Characteristics

- IPv4 Private Address Space (RFC 1918)
 - 10.0.0.0/8
 - 172.16.0.0/12
 - 192.168.0.0/16
- types of addresses
 - Inside local address
 - Inside global address
 - Outside local address
 - Outside global address
- Inside - Outside: Wo ist das Gerät?
- Local - Global: Wo ist das Paket?

6.2 Types of NAT

- Static NAT, Dynamic NAT, Port Address Translation
- Next Available Port
- NAT and PAT Comparison
- Packets without a Layer 4 Segment (ICMP)
- **6.2.7 Packet Tracer** - Investigate NAT Operations

6.3 NAT Advantages and Disadvantages

6.4 Static NAT

- **6.4.5 Packet Tracer** - Configure Static NAT

6.5 Dynamic NAT

- **6.5.6 Packet Tracer** - Configure Dynamic NAT

6.6 PAT

- **6.6.7 Packet Tracer** - Configure PAT

6.7 NAT64

- IPv4 \Rightarrow IPv6
- 192.0.2.1 \Rightarrow 64:ff9b::192.0.2.1
- **6.8.1 Packet Tracer** - Configure NAT for IPv4