Networking Course. Lesson 4. Internetworking and VPN

Document version 0.1
This document was created, but not reviewed yet.
You should use it very carefully.

- NAT
- GRE
- IPSec
- L2TP
- PPTP

Theory

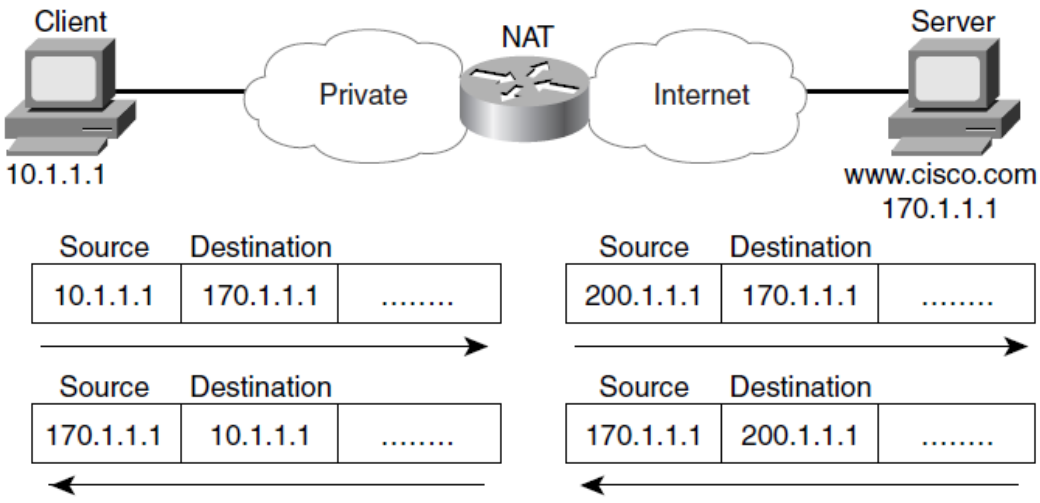
- NAT
- GRE
- IPSec
- L2TP
- PPTP

NAT

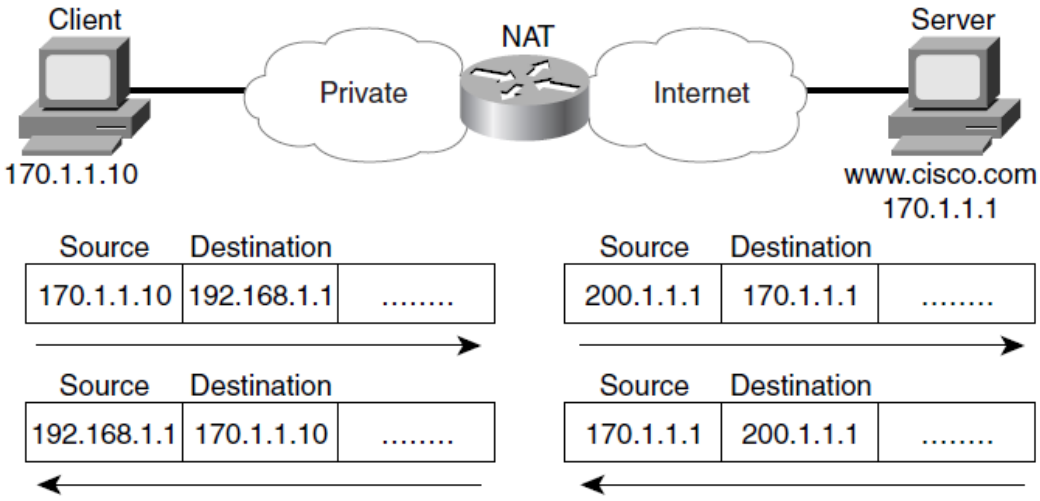
RFC 1918 Private Address Space

Range of IP Addresses	Class of Networks	Number of Networks
10.0.0.0 to 10.255.255.255	A	1
172.16.0.0 to 172.31.255.255	B	16
192.168.0.0 to 192.168.255.255	C	256

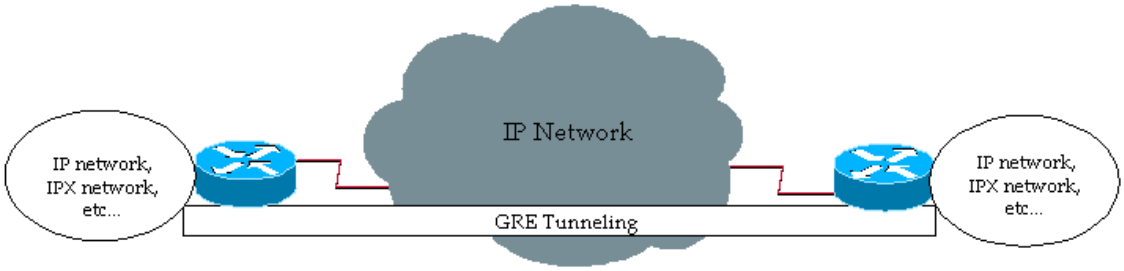
NAT IP Address Swapping—Private Addressing



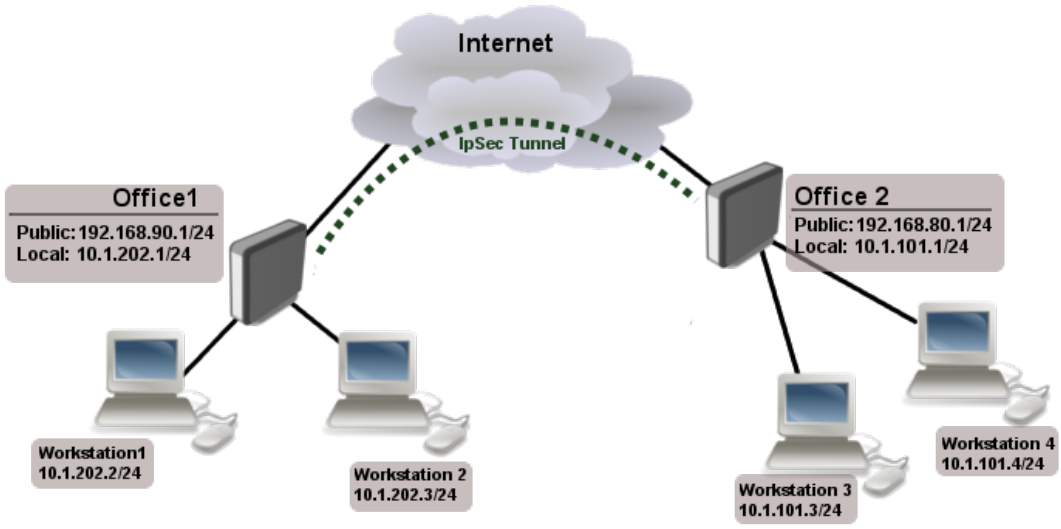
NAT IP Address Swapping—Unregistered Networks



GRE



IPSec

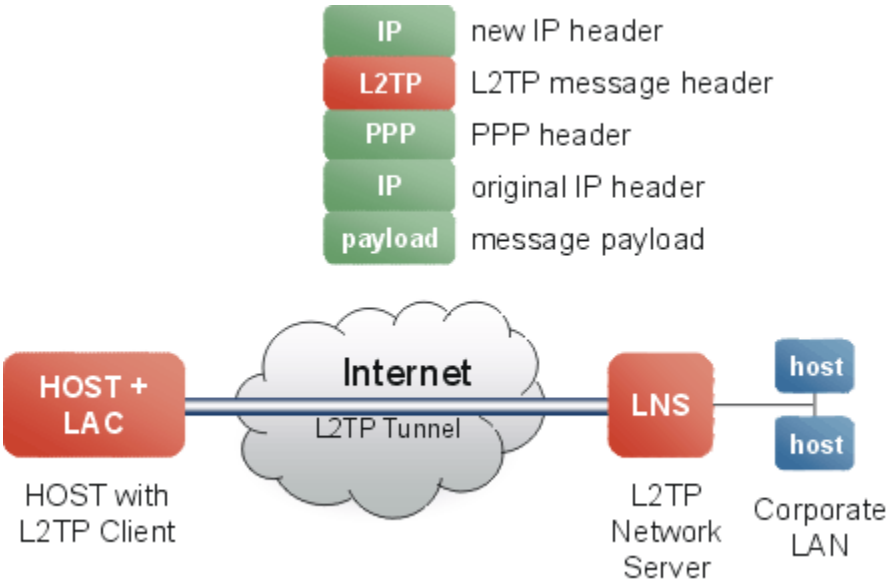


IP	AH	TRANSPORT

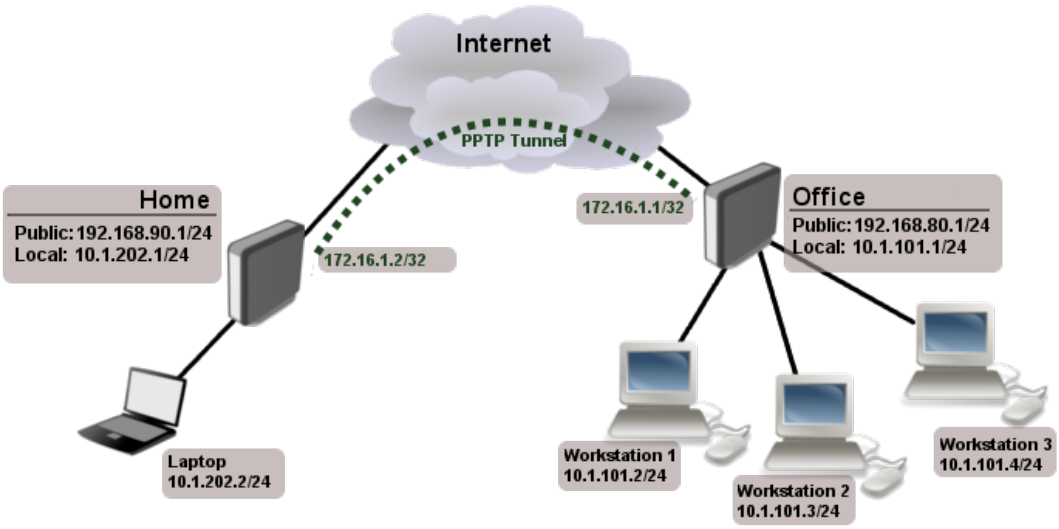
IP	ESP	TRANSPORT

IP	AH	ESP	TRANSPORT

L2TP



PPTP



Practice

- Configuring GRE b/w 2 routers
- Configuring IPSec b/w 2 routers
- Configuring Routing over these tunnels
- Configuring Acccess to and from external network using NAT

Hometasks

⚠ Optional part of course. Network Scheme.

1. 2 branch offices with LANs clarified deeper as possible, down to PCs
    a. including switches and routers
    b. sites should be connected to each other via Internet using a VPN
    c. at each point the used protocol should be referred