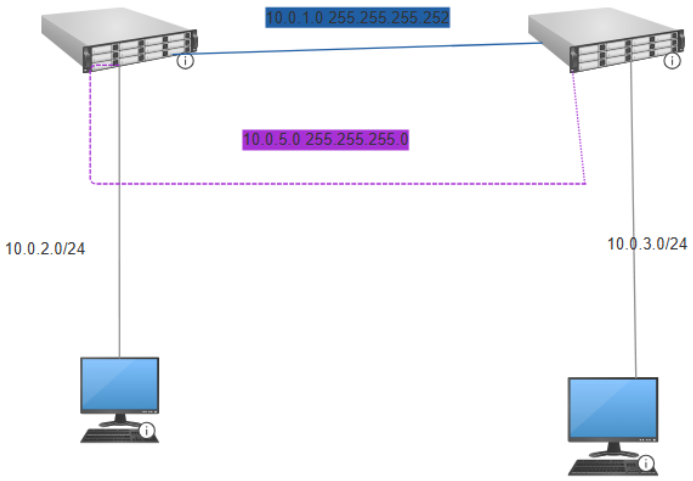
Route based vpn Router-Router



Here we assume that OSPF is already configured. Router on the left is R1 and on the right is R2

Step 1: ISAKMP policy

R1:

crypto isakmp policy 10

encr aes

authentication pre-share

group 2

lifetime 3600

hash sha

R2:

crypto isakmp policy 10

encr aes

authentication pre-share

group 2

lifetime 3600

hash sha

Step 2 Key

R1:

crypto isakmp key cisco address [address of R2 physical interface connected to R1] 10.0.1.2

R2:

crypto isakmp key cisco address [address of R2 physical interface connected to R2] 10.0.1.1

Step 3. Transform set + ipsec profile

R1 and R2:

crypto ipsec transform-set R1R2 esp-aes esp-sha-hmac

    mode tunnel

crypto ipsec profile VTI

    set transform-set R1R2

Step 4. Creating VTI interface

R1:

interface Tunnel0

    ip address 10.0.5.1 255.255.255.0

    tunnel source [ip address of physical interface of R2 connected to R1] 10.0.1.2

    tunnel mode ipsec ipv4

    tunnel destination [ip address of physical interface of R1->R2] 10.0.1.1

    tunnel protection ipsec profile VTI

R2:

interface Tunnel0

    ip address 10.0.5.2 255.255.255.0

    tunnel source [ip address of physical interface of R1->R2] 10.0.1.1

tunnel mode ipsec ipv4

tunnel destination [ip address of physical interface of R2->R1] 10.0.1.2

tunnel protection ipsec profile VTI

Final step: adding route to go through tunnel

This is needed to make sure that traffic from PC-A to PC-B goes through tunnel

Command: ip route [ip address of remote network + netmask + interface of local tunnel

R1:

ip route 10.0.3.0 255.255.255.0 Tunnel0

R2:

ip route 10.0.2.0 255.255.255.0 Tunnel0

Verification

Ping from PC to PC and enter “show crypto ipsec sa” command to see if the number of packets encrypted/decrypted is increasing with each ping