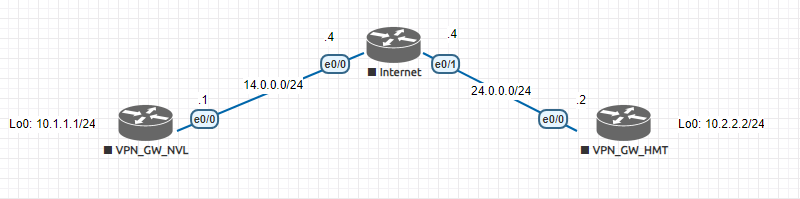
VPN Site to Site configuration

# 

# Topology



# Configure the IP addressing as illustrated in the topology

VPN\_GW\_NVL(config)#interface Loopback0

VPN\_GW\_NVL(config-if)#ip address 10.1.1.1 255.255.255.0

VPN\_GW\_NVL(config)#interface FastEthernet0/0

VPN\_GW\_NVL(config-if)#ip address 14.0.0.1 255.255.255.0

VPN\_GW\_NVL(config-if)#no shutdown

VPN\_GW\_NVL(config)#ip route 0.0.0.0 0.0.0.0 14.0.0.4

VPN\_GW\_HMT(config)#interface Loopback0

VPN\_GW\_HMT(config-if)#ip address 10.2.2.2 255.255.255.0

VPN\_GW\_HMT(config)#interface FastEthernet0/0

VPN\_GW\_HMT(config-if)#ip address 24.0.0.2 255.255.255.0

VPN\_GW\_HMT(config-if)#no shutdown

VPN\_GW\_HMT(config)#ip route 0.0.0.0 0.0.0.0 24.0.0.4

Internet(config)#interface e0/0

Internet(config-if)#ip address 14.0.0.4 255.255.255.0

Internet(config-if)#no shut

Internet(config)#interface e0/1

Internet(config-if)#ip address 24.0.0.4 255.255.255.0

Internet(config-if)#no shut

# Configure NAT translation to translate the LAN networks

VPN\_GW\_NVL(config)#ip access-list extended NAT-ACL

VPN\_GW\_NVL(config-ext-nacl)#deny ip 10.1.1.0 0.0.0.255 10.2.2.0 0.0.0.255

VPN\_GW\_NVL(config-ext-nacl)#permit ip 10.1.1.0 0.0.0.255 any

VPN\_GW\_NVL(config)#ip nat inside source list NAT-ACL interface e0/0 overload

VPN\_GW\_HMT(config)#ip access-list extended NAT-ACL

VPN\_GW\_HMT(config-ext-nacl)#deny ip 10.2.2.0 0.0.0.255 10.1.1.0 0.0.0.255

VPN\_GW\_HMT(config-ext-nacl)#permit ip 10.2.2.0 0.0.0.255 any

VPN\_GW\_HMT(config)#ip nat inside source list NAT-ACL interface e0/0 overload

# Enable the NAT on Lo0 (inside) and fa0/0 (outside) interfaces

VPN\_GW\_NVL(config)#interface loopback 0

VPN\_GW\_NVL(config-if)#ip nat inside

VPN\_GW\_NVL(config)#interface e0/0

VPN\_GW\_NVL(config-if)#ip nat outside

VPN\_GW\_HMT(config)#interface loopback 0

VPN\_GW\_HMT(config-if)#ip nat inside

VPN\_GW\_HMT(config)#interface e0/0

VPN\_GW\_HMT(config-if)#ip nat outside

# Configure Interesting Traffic

VPN\_GW\_NVL(config)#ip access-list extended VPN-TO-VPN\_GW\_HMT

VPN\_GW\_NVL(config-ext-nacl)#permit ip 10.1.1.0 0.0.0.255 10.2.2.0 0.0.0.255

VPN\_GW\_HMT(config)#ip access-list extended VPN-TO-VPN\_GW\_NVL

VPN\_GW\_HMT(config-ext-nacl)#permit ip 10.2.2.0 0.0.0.255 10.1.1.0 0.0.0.255

# Configure Phase 1 ISAKMP

VPN\_GW\_NVL(config)# crypto isakmp policy 1

VPN\_GW\_NVL(config-isakmp)# encr aes

VPN\_GW\_NVL(config-isakmp)# hash sha

VPN\_GW\_NVL(config-isakmp)# authentication pre-share

VPN\_GW\_NVL(config-isakmp)# group 1

VPN\_GW\_HMT(config)# crypto isakmp policy 1

VPN\_GW\_HMT(config-isakmp)# encr aes

VPN\_GW\_HMT(config-isakmp)# hash sha

VPN\_GW\_HMT(config-isakmp)# authentication pre-share

VPN\_GW\_HMT(config-isakmp)# group 1

# Define the pre-shared key for authentication

VPN\_GW\_NVL(config)# crypto isakmp key cisco address 24.0.0.2

VPN\_GW\_HMT(config)# crypto isakmp key cisco address 14.0.0.1

# Configure Phase 2 IPsec

VPN\_GW\_NVL(config)#crypto ipsec transform-set TS-TO-VPN\_GW\_HMT esp-aes esp-sha-hmac

VPN\_GW\_HMT(config)#crypto ipsec transform-set TS-TO-VPN\_GW\_NVL esp-aes esp-sha-hmac

# Configure a crypto map

VPN\_GW\_NVL(config)#crypto map VPNMAP 1 ipsec-isakmp

VPN\_GW\_NVL(config-crypto-map)#set peer 24.0.0.2

VPN\_GW\_NVL(config-crypto-map)#set transform-set TS-TO-VPN\_GW\_HMT

VPN\_GW\_NVL(config-crypto-map)#match address VPN-TO-VPN\_GW\_HMT

VPN\_GW\_HMT(config)#crypto map VPNMAP 1 ipsec-isakmp

VPN\_GW\_HMT(config-crypto-map)#set peer 14.0.0.1

VPN\_GW\_HMT(config-crypto-map)#set transform-set TS-TO-VPN\_GW\_NVL

VPN\_GW\_HMT(config-crypto-map)#match address VPN-TO-VPN\_GW\_NVL

# Attach the crypto map above to interface

VPN\_GW\_NVL(config)#interface e0/0

VPN\_GW\_NVL(config-if)#crypto map VPNMAP

VPN\_GW\_HMT(config)#interface e0/0

VPN\_GW\_HMT(config-if)#crypto map VPNMAP

# To verify the VPN Tunnel between VPN\_GW\_NVL and VPN\_GW\_HMT:

VPN\_GW\_NVL#show crypto session

VPN\_GW\_NVL#show crypto isakmp sa

VPN\_GW\_NVL#show crypto isakmp sa detail

VPN\_GW\_NVL#show crypto ipsec sa

VPN\_GW\_NVL#show crypto ipsec sa detail

VPN\_GW\_NVL#show crypto ipsec sa | s local | remote | pkts