**江苏科技大学**

**课程设计报告**

课 程： 计算机网络与安全课程设计

课 题： IPSec VPN中的高可用性技术

——RRI技术及其使用

学 院： 计算机学院

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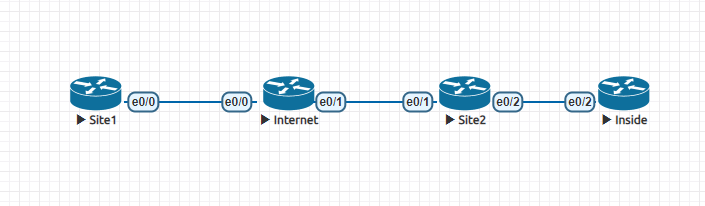
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# 实验内容暨实验结果

**Step 1**，创建加密设备NAT问题分析实验拓扑，其中，Site1和Site2是两个VPN站点连接的网关路由器，也是IPSec VPN的加密设备。

**Step 2**，配置路由器的IP地址与路由，即执行基本网络配置。

2.1 Site1上的基本网络与IPSec VPN配置

|  |
| --- |
| enable  config t  hostname Site1  crypto isakmp policy 10  authentication pre-share  crypto isakmp key cisco address 61.128.1.1  crypto ipsec transform0set cisco esp-des esp-md5-hmac  crypto ipsec transform-set cisco esp-des esp-md5-hmac  crypto map cisco 10 ipsec-isakmp  set peer 61.128.1.1  set transform-set cisco  match address vpn  interface Loopback0  ip address 1.1.1.1 255.255.255.0  interface Ethernet0/0  ip address 202.100.1.1 255.255.255.0  crypto map cisco  no shutdown  ip route 0.0.0.0 0.0.0.0 200.100.1.10  ip access-list extended vpn  permit ip 1.1.1.0 0.0.0.255 2.2.2.0 0.0.0.255  end |

2.2 Internet上的基本网络配置

|  |
| --- |
| enable  config t  hostname Internet  interface Ethernet0/0  ip address 202.100.1.10 255.255.255.0  no shutdown  interface Ethernet0/1  p address 61.128.1.10 255.255.255.0  no shutdown  end |

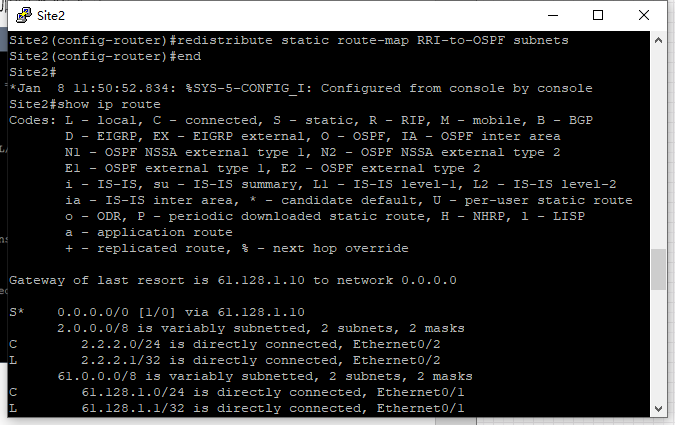
2.3 Site2上的基本网络与IPSec VPN配置

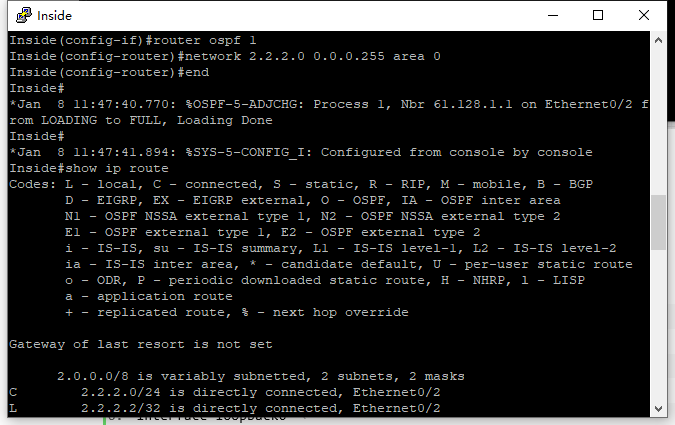
|  |
| --- |
| enable  config t  hostname Site2  crypto isakmp policy 10  authentication pre-share  crypto isakmp key cisco address 202.100.1.1  crypto ipesc transform-set cisco esp-des esp-md5-hmac  crypto ipsec transform-set cisco esp-des esp-md5-hmac  crypto map cisco 10 ipsec-isakmp  set peer 202.100.1.1  set transfoem-set cisco  set transform-set cisco  match address vpn  interface Ethernet0/1  ip address 61.128.1.1 255.255.255.0  crypto map cisco  no shutdown  interface Ethernet0/2  ip address 2.2.2.1 255.255.255.0  no shutdown  router ospf 1  network 2.2.2.0 0.0.0.255 area 0  ip route 0.0.0.0 0.0.0.0 61.128.1.10  ip access-list extended vpn  permit ip 2.2.2.0 0.0.0.255 1.1.1.0 0.0.0.255  end |

2.4 Inside上的基本网络配置

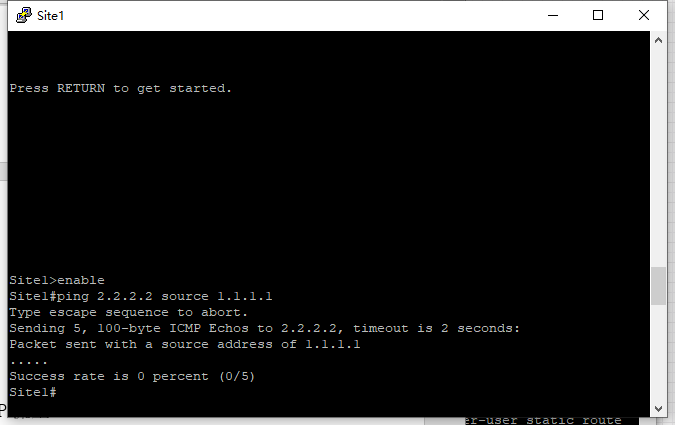
|  |
| --- |
| enable  config t  hostname Inside  interface Ethernet0/2  ip address 2.2.2.2 255.255.255.0  no shutdown  router ospf 1  network 2.2.2.0 0.0.0.255 area 0  end |

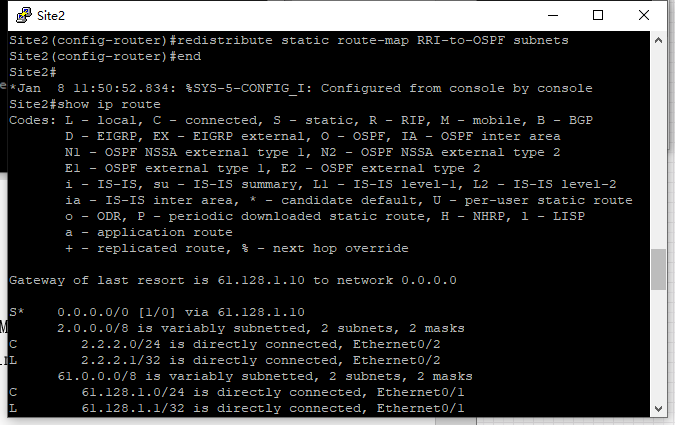
**Step 3**，RRI配置

3.1 查看Site2路由表

3.2 查看Inside路由表

**Step 4**，建立IPSec VPN，并查看路由状态

4.1 Site1使用ping触发IPSec VPN

4.2 查看Site2路由表

4.3查看Inside路由表

