Configuring the Cisco VPN 5000 and a Router to Open a GRE Tunnel

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Cisco has announced the end of sales for the Cisco VPN 5000 Series Concentrators. For more information, please see the End–of–Sales Announcement.

Contents

Introduction

This document provides an overview of the configuration required to allow a Cisco router running Cisco IOS® software and a Cisco VPN 5000 Series Concentrator to open a Generic Routing Encapsulation (GRE) tunnel.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software and hardware versions:

- Cisco IOS Software Release 12.0(7)T
- Cisco VPN 5000 Concentrator software version 5.2.19US
- Cisco VPN 5002 Concentrator

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to Cisco Technical Tips Conventions.

Configure

In this section, you are presented with the information to configure the features described in this document.

Note: To find additional information on the commands used in this document, use the Command Lookup Tool (registered customers only) .

Network Diagram

This document uses the network setup shown in this diagram.
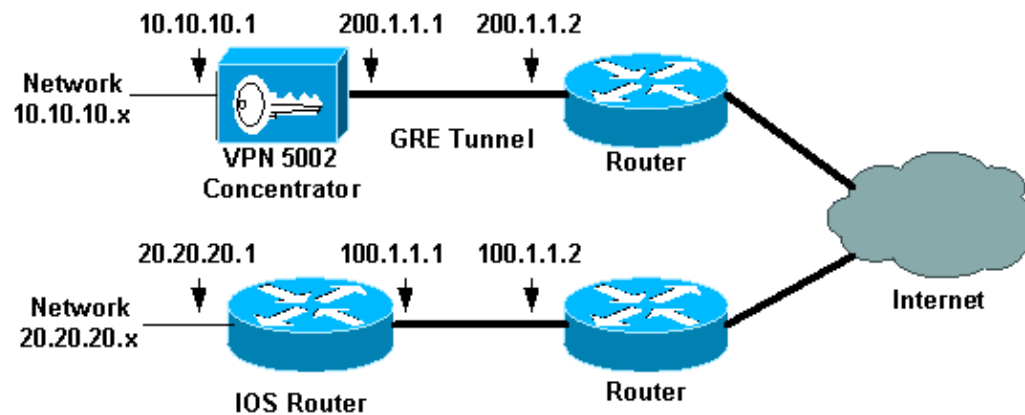
Configurations

This document uses the configurations shown here.

- Cisco VPN 5002 Concentrator
- Router running Cisco IOS software

Cisco VPN 5002 Concentrator

```
[ General ]
 IPSecGateway           = 200.1.1.2
 DeviceName             = "omar5002"
 EthernetAddress        = 00:00:a5:
 e9:c8:00
 DeviceType             = VPN 5002/8 Concentrator
 ConfiguredOn           = Timeserver not configured
 ConfiguredFrom         = Command Line, from Console
 EnablePassword         =
 Password               =


[ IP Ethernet 1:0 ]
 Mode                   = Routed
 SubnetMask             = 255.255.255.0
 IPAddress              = 200.1.1.1


[ IP Ethernet 0:0 ]
```

```
 Mode                      = Routed
 SubnetMask                = 255.255.255.0
 IPAddress                 = 10.10.10.1


[ Tunnel Partner VPN 1 ]
 EncryptMethod             = None
 Encryption                = Off
 Authentication            = Off
 KeyManage                 = Manual
 Mode                      = Main
 Partner                   = 100.1.1.1
 LocalAccess               = "10.10.10.0/24"
 BindTo                    = "ethernet1:0"
 Peer                      = "20.20.20.0/24"


[ IP Static ]
 20.20.20.0 255.255.255.0 vpn 1 1


[ IP VPN 1 ]
 Numbered                  = Off
 Mode                      = Routed
 Configuration size is 1107 out of 65500 bytes.
 omar5002#
```

Router Running Cisco IOS Software

```
Router Configuration:
Router#show running-config
Building configuration...
Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Router
!
!
ip subnet-zero
!
!
!
interface Tunnel0
ip unnumbered Ethernet1
no ip directed-broadcast
tunnel source 100.1.1.1
tunnel destination 200.1.1.1
!
interface Ethernet0
ip address 100.1.1.1 255.255.255.0
no ip directed-broadcast
!
interface Ethernet1
ip address 20.20.20.1 255.255.255.0
no ip directed-broadcast
!
!
ip classless
ip route 0.0.0.0 0.0.0.0 100.1.1.2 1
ip route 10.10.10.0 255.255.255.0 Tunnel0
no ip http server
```

```
!
!
line con 0
transport input none
line aux 0
line vty 0 4
login
!
end
```

Verify

This section provides information you can use to confirm your configuration is working properly.

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only) , which allows you to view an analysis of **show** command output.

- **show vpn statistics verbose** Provides detailed tunnel information.
- **show interface** Provides interface statistics.

This is sample command output of the **show vpn statistics verbose** taken from the Cisco VPN 5002 Concentrator.

```
omar5002#show vpn statistic verbose
Current  In         High      Running Tunnel  Tunnel  Tunnel
Active   Negot      Water     Total   Starts  OK      Error
----------------------------------------------------------
Users    0          0         0       0       0       0      0
Partners 1          0         1       1       0       0      0
Total    1          0         1       1       0       0      0
Stats               VPN0:1
Wrapped             697
Unwrapped           697
BadEncap            0
BadAuth             0
BadEncrypt          0
rx IP               718
rx IPX              0
rx Other            0
tx IP               734
tx IPX              0
tx Other            0
IKE rekey           0
Input VPN pkts dropped due to no SA: 0
Input VPN pkts dropped due to no free queue entries: 0
ISAKMP Negotiation stats
Admin packets in        0
Fastswitch packets in   0
No cookie found         0
Can't insert cookie     0
Inserted cookie(L)      0
Inserted cookie(R)      0
Cookie not inserted(L)  0
Cookie not inserted(R)  0
Cookie conn changed     0
Cookie already inserted  0
Deleted cookie(L)       0
Deleted cookie(R)       0
Cookie not deleted(L)   0
Cookie not deleted(R)   0
Forwarded to RP         0
Forwarded to IOP        0
```

```
Bad UDP checksum        0
Not fastswitched        0
```

This is sample command output of the **show interface** command taken from the router.

```
Router#show interface tunnel 0
Tunnel0 is up, line protocol is up
Hardware is Tunnel
Interface is unnumbered. Using address of Ethernet1 (20.20.20.1)
MTU 1476 bytes, BW 9 Kbit, DLY 500000 usec,
reliability 255/255, txload 55/255, rxload 113/255
Encapsulation TUNNEL, loopback not set
Keepalive set (10 sec)
Tunnel source 100.1.1.1, destination 200.1.1.1
Tunnel protocol/transport GRE/IP, key disabled, sequencing disabled
Checksumming of packets disabled,  fast tunneling enabled
Last input 00:00:15, output 00:00:15, output hang never
Last clearing of "show interface" counters never
Queueing strategy: fifo
Output queue 0/0, 1 drops; input queue 0/75, 0 drops
5 minute input rate 4000 bits/sec, 5 packets/sec
5 minute output rate 11000 bits/sec, 5 packets/sec
1309 packets input, 129264 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
1348 packets output, 316468 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
Router#
```

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

Related Information

- **Cisco VPN 5000 Series Concentrators Support Page**
- **Cisco VPN 5000 Client Support Page**
- **IPSec (IP Security Protocol) Support Page**
- **Technical Support – Cisco Systems**

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