Configuring GRE Tunnel Over Cable

Document ID: 12084

Contents

Introduction

This document contains descriptions, configurations and verifications for Generic Routing Encapsulation (GRE) in a cable environment. GRE is a tunneling protocol developed by Cisco that encapsulates a wide variety of protocol packet types inside IP tunnels.

Before You Begin

Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

Prerequisites

There are no specific prerequisites for this document.

Components Used

The information in this document is based on the software and hardware versions below.

- Cable Modem uBR924 running Cisco IOS® Software Release 12.1(5)T4

Note: Although it is possible to configure GRE tunnels in other Cisco cable modem platforms, such as on the uBR904 using different Cisco IOS versions, the official support for this feature is on Cisco IOS 12.1(5)T4 for uBR920 and from Cisco IOS 12.1(3) for uBR910.

Cable Modem Platform	Cisco IOS Software Release
uBR920	12.1(5)T4
uBR910	From 12.1(3) and later

To run this configuration, you need to have IP connectivity between the two cable modems.

The information presented in this document was created from devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If you are working in a live network, ensure that you understand the potential impact of any command before using it.

Background Theory

Tunneling provides a way to encapsulate packets of a foreign protocol inside a transport protocol. Tunneling is implemented as a virtual interface to provide a simple interface for configuration. The tunnel interface is not tied to specific passenger or transport protocols, however, it is an architecture that is designed to provide the services necessary to implement any standard point−to−point encapsulation scheme. Tunnels are point−to−point links, and you must configure a separate tunnel for each link.

GRE creates a virtual point−to−point link to Cisco routers at remote points over an IP internetwork. By connecting multiprotocol subnetworks in a single−protocol backbone environment, IP tunneling using GRE allows network expansion across a single−protocol backbone environment. A Cable Modem Termination System (CMTS) is any Data−over−Cable Service Interface Specifications (DOCSIS)−compliant headend cable router, such as the Cisco uBR7246, uBR7223, or uBR7246VXR.

Configure

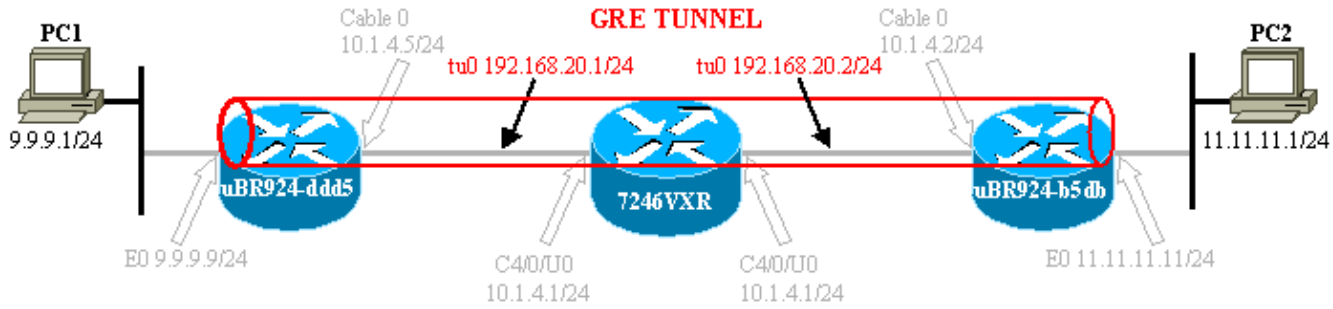
In this section, you are presented with the information to configure the features described in this document.

Network Diagram

This document uses the network setup shown in the diagram below.

This setup creates a tunnel between the two cable modems uBR924−ddd5 and uBR924−b5db. The example below uses two uBR924s and a uBR7246VXR. For this set up, the names of the cable modems are ubr924−ddd5 and ubr924−b5db, and they use Cisco IOS version 12.1(5)T4. The tunnel interfaces are dynamically created in global configuration mode by issuing the command **interface tunnel 0**.

Note: The uBR900 cable modems do not have to be connected to the same uBR7200 CMTS or the same service provider's network as long as there is IP connectivity between the two cable modems.



Configurations

This document uses the configurations shown below.

Note: Bold text refers to GRE related commands. Comments are in blue and refer to the line above.

ubr924−ddd5

```
version 12.1
no service single-slot-reload-enable
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname ubr924-ddd5
!
logging rate-limit console 10 except errors
!
clock timezone - -80
ip subnet-zero
no ip finger
!
call rsvp-sync
!
!
!
!
!
!
!
!
!
!
interface Tunnel0

!--- Tunnel interface 0.

 ip address 192.168.20.1 255.255.255.0

!--- IP address of the GRE tunnel interface 0.

 tunnel source Ethernet0


!--- IP source of the tunnel. It is best to make this an
!--- interface with a public, routable IP address so that
!--- it is reachable from the other endpoint of the tunnel.

 tunnel destination 11.11.11.11


!--- IP destination of the tunnel. Make sure this is
!--- reachable via the ping command
!--- Otherwise, the tunnel will not be created properly.


!
interface Ethernet0
 ip address 9.9.9.9 255.255.255.0
 ip rip send version 2

!--- Send RIP version 2 packets.

 ip rip receive version 2

!--- Receive RIP version 2 packets.

!
interface cable-modem0
 ip rip send version 2

!--- Send RIP version 2 packets.
```

```
 ip rip receive version 2

!--- Receive RIP version 2 packets.

 cable-modem downstream saved channel 525000000 40 1
 cable-modem mac-timer t2 40000
 no cable-modem compliant bridge
!
router rip
 version 2
 passive-interface Tunnel0


!--- This command is used to avoid recursive routing.

 network 10.0.0.0
 network 9.0.0.0
 no auto-summary
!
ip default-gateway 10.1.4.1
ip classless
no ip http server
no ip http cable-monitor
!
snmp-server packetsize 4096
snmp-server manager
!
voice-port 0
 input gain -2
!
voice-port 1
 input gain -2
!
!
line con 0
 transport input none
line vty 0 4
 login
!
end

ubr924-ddd5#
```

ubr924-b5db

```
version 12.1
no service single-slot-reload-enable
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname ubr924-b5db
!
logging rate-limit console 10 except errors
enable password ww
!
clock timezone - -80
ip subnet-zero
no ip finger
!
mgcp
call rsvp-sync
!
!
```

```
!
!
!
!
!
!
!
!

interface Tunnel0

!--- Tunnel interface 0

 ip address 192.168.20.2 255.255.255.0

!--- IP address of the gre tunnel interface 0

 tunnel source Ethernet0


!--- IP source of the tunnel. It is best to make this an
!--- interface with a public, routable IP address so that
!--- it is reachable from the other endpoint of the tunnel.

 tunnel destination 9.9.9.9


!--- IP destination of the tunnel. Make sure this is
!--- reachable via the ping command
!--- Otherwise, the tunnel will not be created properly.

!
interface Ethernet0
 ip address 11.11.11.11 255.255.255.0
 ip rip send version 2

!--- Send RIP version 2 packets.

 ip rip receive version 2

!--- Receive RIP version 2 packets.

!
 no ip route-cache
 no ip mroute-cache
!
interface cable-modem0
 ip rip send version 2

!--- Send RIP version 2 packets.

 ip rip receive version 2

!--- Receive RIP version 2 packets.

 no ip route-cache
 no ip mroute-cache
 no cable-modem compliant bridge
!
router rip
 version 2
 passive-interface Tunnel0


!--- This command is used to avoid recursive routing.
```

```
 network 10.0.0.0
 network 11.0.0.0
 no auto-summary
!
ip default-gateway 10.1.4.1
ip classless
no ip http server
no ip http cable-monitor
!
snmp-server packetsize 4096
snmp-server manager
!
voice-port 0
 input gain -2
!
voice-port 1
 input gain -2
!
!
line con 0
 exec-timeout 0 0
 transport input none
line vty 0 4
 password ww
 login
!
end

ubr924-b5db#
```

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, which allows you to view an analysis of **show** command output.

Verify that the CMTS (7246VXR) configuration is correct, and that the cable modems are online. The configuration of the CMTS is shown below.

```
7246VXR#show run
Building configuration...

Current configuration : 4579 bytes
!
! Last configuration change at 13:22:17 PDT Mon Feb 26 2001
! NVRAM config last updated at 13:22:46 PDT Mon Feb 26 2001
!
version 12.1
no service single-slot-reload-enable
no service pad
service timestamps debug datetime msec localtime
service timestamps log datetime localtime
no service password-encryption
service linenumber
service udp-small-servers max-servers no-limit
!
hostname 7246VXR
!
logging buffered 1000000 debugging
logging rate-limit console 10 except errors
enable password cable
!
```

```
cable qos profile 8
cable qos profile 10
cable qos profile 10 grant-size 1500
cable qos profile 12 guaranteed-upstream 100000
no cable qos permission create
no cable qos permission update
cable qos permission modems
cable time-server
clock timezone PDT -8
clock summer-time PDT recurring
clock calendar-valid
ip subnet-zero
no ip finger
!
interface Ethernet2/0
 ip address 172.16.30.4 255.255.255.192
 no ip mroute-cache
 half-duplex
!

interface Cable4/0
 ip address 172.16.29.1 255.255.255.224 secondary
 ip address 10.1.4.1 255.255.255.0
 no keepalive
 cable downstream rate-limit token-bucket shaping
 cable downstream annex B
 cable downstream modulation 64qam
 cable downstream interleave-depth 32
 cable downstream frequency 555000000
 cable upstream 0 frequency 40000000
 cable upstream 0 power-level 0
 no cable upstream 0 shutdown
 cable upstream 1 shutdown
 cable upstream 2 shutdown
 cable upstream 3 shutdown
 cable upstream 4 shutdown
 cable upstream 5 shutdown
 cable dhcp-giaddr policy
 cable helper-address 172.16.30.2
!
interface Cable5/0
 ip address 172.16.29.225 255.255.255.224 secondary
 ip address 10.1.5.1 255.255.255.0
 load-interval 30
 no keepalive
 cable downstream rate-limit token-bucket shaping
 cable downstream annex B
 cable downstream modulation 64qam
 cable downstream interleave-depth 32
 cable downstream frequency 620000000
 cable upstream 0 frequency 25008000
 cable upstream 0 power-level 0
 no cable upstream 0 shutdown
 no cable upstream 1 shutdown
 cable dhcp-giaddr policy
!
router eigrp 202
 redistribute connected
 redistribute static
 network 10.0.0.0
 network 172.16.0.0
 no auto-summary
 no eigrp log-neighbor-changes
!
router rip
 version 2
```

```
 redistribute connected
 redistribute static
 network 10.0.0.0
 network 172.16.0.0
 no auto-summary
!
ip default-gateway 172.16.30.1
ip classless
ip route 0.0.0.0 0.0.0.0 172.16.30.1
ip route 172.16.30.0 255.255.255.0 Ethernet2/0
ip http server
ip http authentication local
!
access-list 188 permit tcp any any eq www log
access-list 188 permit ip any any
route-map docsis permit 10
!
snmp-server engineID local 00000009020000E01ED77E40
snmp-server community public RO
snmp-server community private RW

line con 0
 exec-timeout 0 0
 transport input none
line aux 0
 speed 19200
line vty 0 4
 session-timeout 60
 exec-timeout 0 0
!
ntp clock-period 17179973
end

7246VXR#show cable modem
Interface   Prim Online     Timing Rec    QoS CPE IP address      MAC address
            Sid  State      Offset Power
Cable4/0/U0 69   online     2812    0.25  5   0   10.1.4.3        0002.1685.b5db
Cable4/0/U0 70   online     2288    0.00  5   0   10.1.4.6        0010.7bed.9b23
Cable4/0/U0 71   online     2289    0.50  5   0   10.1.4.2        0010.7bed.9b45
Cable4/0/U0 72   online     2812    0.00  5   0   10.1.4.4        0002.fdfa.0a63
Cable4/0/U0 73   online     2812   -0.75  5   0   10.1.4.5        0004.2752.ddd5
Cable4/0/U0 74   online     2813    0.25  5   0   10.1.4.7        0001.64ff.e47d
```

If the cable modems online state does not show `online`, refer to Troubleshooting uBR Cable Modems Not Coming Online document.

```
7246VXR#show ip interface brief
Interface                  IP-Address      OK? Method Status                Protocol
FastEthernet0/0            192.168.7.253   YES NVRAM  up                    down
Ethernet2/0                172.16.30.4     YES manual up                    up
Ethernet2/1                unassigned      YES NVRAM  administratively down down
Ethernet2/2                unassigned      YES NVRAM  administratively down down
Ethernet2/3                unassigned      YES NVRAM  administratively down down
Cable3/0                   10.1.3.1        YES manual up                    up
Cable4/0                   10.1.4.1        YES manual up                    up
Cable5/0                   10.1.5.1        YES manual up                    up

7246VXR#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

```
Gateway of last resort is 172.16.30.1 to network 0.0.0.0

     172.16.0.0/16 is variably subnetted, 4 subnets, 3 masks
C       172.16.29.224/27 is directly connected, Cable5/0
C       172.16.29.0/27 is directly connected, Cable4/0
S       172.16.30.0/24 is directly connected, Ethernet2/0
C       172.16.30.0/26 is directly connected, Ethernet2/0
     9.0.0.0/24 is subnetted, 1 subnets
R       9.9.9.0 [120/1] via 10.1.4.5, 00:00:09, Cable4/0
R    192.168.20.0/24 [120/1] via 10.1.4.5, 00:00:09, Cable4/0
     10.0.0.0/8 is variably subnetted, 5 subnets, 2 masks
C       10.1.3.0/24 is directly connected, Cable3/0
R       10.5.5.0/24 [120/1] via 10.1.4.4, 00:00:01, Cable4/0
R       10.0.0.0/8 [120/1] via 172.16.30.10, 00:00:24, Ethernet2/0
C       10.1.5.0/24 is directly connected, Cable5/0
C       10.1.4.0/24 is directly connected, Cable4/0
     11.0.0.0/24 is subnetted, 1 subnets
R       11.11.11.0 [120/1] via 10.1.4.3, 00:00:15, Cable4/0
S*   0.0.0.0/0 is directly connected
```

From the cable modems side, verify the **sh version** of both devices, as shown below.

```
ubr924-ddd5#sh ver
Cisco Internetwork Operating System Software
IOS (tm) 920 Software (UBR920-K1V4Y556I-M), Version 12.1(5)T4,  RELEASE SOFTWARE (fc1)
TAC Support: http://www.cisco.com/pcgi-bin/ibld/view.pl?i=support
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Fri 02-Feb-01 10:55 by ccai
Image text-base: 0x800100A0, data-base: 0x806DB770

ROM: System Bootstrap, Version 12.0(6r)T3, RELEASE SOFTWARE (fc1)
ROM: 920 Software (UBR920-K1V4Y556I-M), Version 12.1(5)T4,  RELEASE SOFTWARE (fc1)

ubr924-ddd5 uptime is 2 hours, 1 minute
System returned to ROM by reload at 12:45:25 - Fri Feb 23 2001
System restarted at 12:46:07 - Fri Feb 23 2001
System image file is "flash:ubr920-k1v4y556i-mz.121-5.T4"

cisco uBR920 CM (MPC850) processor (revision 4.d) with 15872K/1024K bytes of memory.
Processor board ID FAA0444Q14Z
Bridging software.
1 Ethernet/IEEE 802.3 interface(s)
1 Cable Modem network interface(s)
3968K bytes of processor board System flash (Read/Write)
1536K bytes of processor board Boot flash (Read/Write)

Configuration register is 0x2102

ubr924-b5db#show ver
Cisco Internetwork Operating System Software
IOS (tm) 920 Software (UBR920-K1V4Y556I-M), Version 12.1(5)T4,  RELEASE SOFTWARE (fc1)
TAC Support: http://www.cisco.com/pcgi-bin/ibld/view.pl?i=support
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Fri 02-Feb-01 10:55 by ccai
Image text-base: 0x800100A0, data-base: 0x806DB770

ROM: System Bootstrap, Version 12.0(6r)T3, RELEASE SOFTWARE (fc1)
ROM: 920 Software (UBR920-K1V4Y556I-M), Version 12.1(5)T4,  RELEASE SOFTWARE (fc1)

ubr924-b5db uptime is 1 hour, 53 minutes
System returned to ROM by reload at 12:55:34 - Fri Feb 23 2001
System restarted at 12:56:15 - Fri Feb 23 2001
System image file is "flash:ubr920-k1v4y556i-mz.121-5.T4"

cisco uBR920 CM (MPC850) processor (revision 3.e) with 15872K/1024K bytes of memory.
```

```
Processor board ID FAA0422Q04F
Bridging software.
1 Ethernet/IEEE 802.3 interface(s)
1 Cable Modem network interface(s)
3968K bytes of processor board System flash (Read/Write)
1536K bytes of processor board Boot flash (Read/Write)

Configuration register is 0x2102
```

The tunnel will show up/up, as long as the following conditions exist:

- It is configured with valid IP addresses.
- There is a route in the routing table to the tunnel destination IP address, and not the IP address assigned to the far end of the tunnel.

This should be true regardless of whether you can ping the destination address. An incorrect static route or a default route pointing in the wrong direction will bring up the tunnel, however, the tunnel will not work.

The first step to verify that the tunnel works is to verify that the tunnel is up. Issue the **show ip interface brief** and **show interface tunnel 0** commands on both cable modems. Sample command output is shown below.

```
ubr924-ddd5#show ip interface brief
Interface                  IP-Address      OK? Method Status                Protocol
Ethernet0                  9.9.9.9         YES manual up                    up
Tunnel0                    192.168.20.1    YES manual up                    up
cable-modem0               10.1.4.5        YES unset  up                    up

ubr924-ddd5#show interface tunnel 0
Tunnel0 is up, line protocol is up
  Hardware is Tunnel
  Internet address is 192.168.20.1/24
  MTU 1514 bytes, BW 9 Kbit, DLY 500000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation TUNNEL, loopback not set
  Keepalive set (10 sec)
  Tunnel source 9.9.9.9 (Ethernet0), destination 11.11.11.11
  Tunnel protocol/transport GRE/IP, key disabled, sequencing disabled
  Checksumming of packets disabled
  Last input 00:15:25, output 00:14:27, output hang never
  Last clearing of "show interface" counters never
  Queueing strategy: fifo
  Output queue 0/0, 2 drops; input queue 0/75, 0 drops
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     146 packets input, 21024 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
     172 packets output, 57392 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 output buffer failures, 0 output buffers swapped out


ubr924-b5db#show ip interface brief
Interface                  IP-Address      OK? Method Status                Protocol
Ethernet0                  11.11.11.11     YES manual up                    up
Tunnel0                    192.168.20.2    YES manual up                    up
cable-modem0               10.1.4.3        YES NVRAM  up                    up

ubr924-b5db#show interface tunnel 0
Tunnel0 is up, line protocol is up
  Hardware is Tunnel
  Internet address is 192.168.20.2/24
  MTU 1514 bytes, BW 9 Kbit, DLY 500000 usec,
```

```
   reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation TUNNEL, loopback not set
  Keepalive set (10 sec)
  Tunnel source 11.11.11.11 (Ethernet0), destination 9.9.9.9
  Tunnel protocol/transport GRE/IP, key disabled, sequencing disabled
  Checksumming of packets disabled
  Last input 00:16:42, output 00:17:40, output hang never
  Last clearing of "show interface" counters never
  Queueing strategy: fifo
  Output queue 0/0, 5 drops; input queue 0/75, 0 drops
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     118 packets input, 19144 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
     164 packets output, 49624 bytes, 0 underruns
     0 output errors, 0 collisions, 0 interface resets
     0 output buffer failures, 0 output buffers swapped out
```

Verify that the tunnel works is to ping the tunnel destination IP address. This will verify IP connectivity only, not the actual functioning of the tunnel.

```
From ubr924−ddd5 we ping 11.11.11.11
ubr924−ddd5#ping 11.11.11.11

Type escape sequence to abort.
Sending 5, 100−byte ICMP Echos to 11.11.11.11, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round−trip min/avg/max = 12/14/17 ms
ubr924−ddd5#
```

Ping from ubr924−b5db the destination address 9.9.9.9.

```
ubr924−b5db#ping 9.9.9.9

Type escape sequence to abort.
Sending 5, 100−byte ICMP Echos to 9.9.9.9, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round−trip min/avg/max = 12/14/16 ms
ubr924−b5db#
```

To verify that the tunnel works, issue the **show ip route** *x.x.x.x* command, where ***x.x.x.x*** is the IP address assigned to the far end of the tunnel. In this case, it would be the loop−back address of the far router. If the only route shown is to the tunnel interface, a ping to that address will prove that the tunnel works.

If there is an IP addressing scheme that advertises routes to the tunnel segment back across the network, there would be more than one route to the far end of the tunnel interface. If that is the case, it is very difficult to verify that the tunnel is working. Typically in this situation, you do not want duplicate routes to the tunnel network. Steps should be taken to prevent the advertisement of the routes by a routing protocol across the network. If the tunnel is being used to transport traffic of a different protocol from IP, the same basic verification method applies.

```
From ubr924−ddd5 we get
ubr924−ddd5#show ip route 192.168.20.2
Routing entry for 192.168.20.0/24
  Known via "connected", distance 0, metric 0 (connected, via interface)
  Routing Descriptor Blocks:
  * directly connected, via Tunnel0
      Route metric is 0, traffic share count is 1

From ubr924−b5db we get
```

```
ubr924-b5db#show ip route 192.168.20.1
Routing entry for 192.168.20.0/24
  Known via "connected", distance 0, metric 0 (connected, via interface)
  Routing Descriptor Blocks:
  * directly connected, via Tunnel0
      Route metric is 0, traffic share count is 1
```

To verify that PC1 can access PC2 and vice versa, perform extended pings on the cable modems, and also pings from the PCs .

Perform an extended ping on ubr924−b5db from its Ethernet interface (11.11.11.11) to the ubr924−ddd5's Ethernet interface (9.9.9.9).

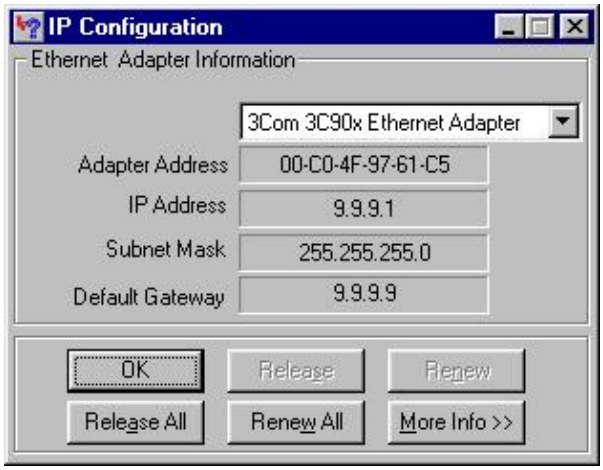
```
ubr924-b5db#ping ip
Target IP address: 9.9.9.9

!−−− ubr924-ddd5 Ethernet's IP address.

Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 11.11.11.11

!−−− ubr924-b5db Ethernet's IP address.

Type of service [0]:
Set DF bit in IP header? [no]:
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 9.9.9.9, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 12/16/28 ms
ubr924-b5db#
```

Perform the opposite to test the other side's connectivity.

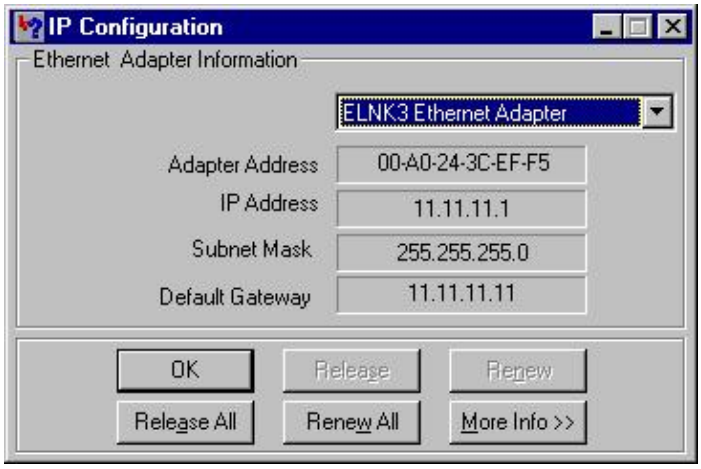
```
ubr924-ddd5#ping ip
Target IP address: 11.11.11.11

!−−− ubr924-b5db Ethernet's IP address.

Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 9.9.9.9

!−−− ubr924-ddd5 Ethernet's IP address.

Type of service [0]:
Set DF bit in IP header? [no]:
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 11.11.11.11, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 12/14/16 ms
ubr924-ddd5#
```

The final test is to ping from PC1 to PC2, and PC2 to PC1.

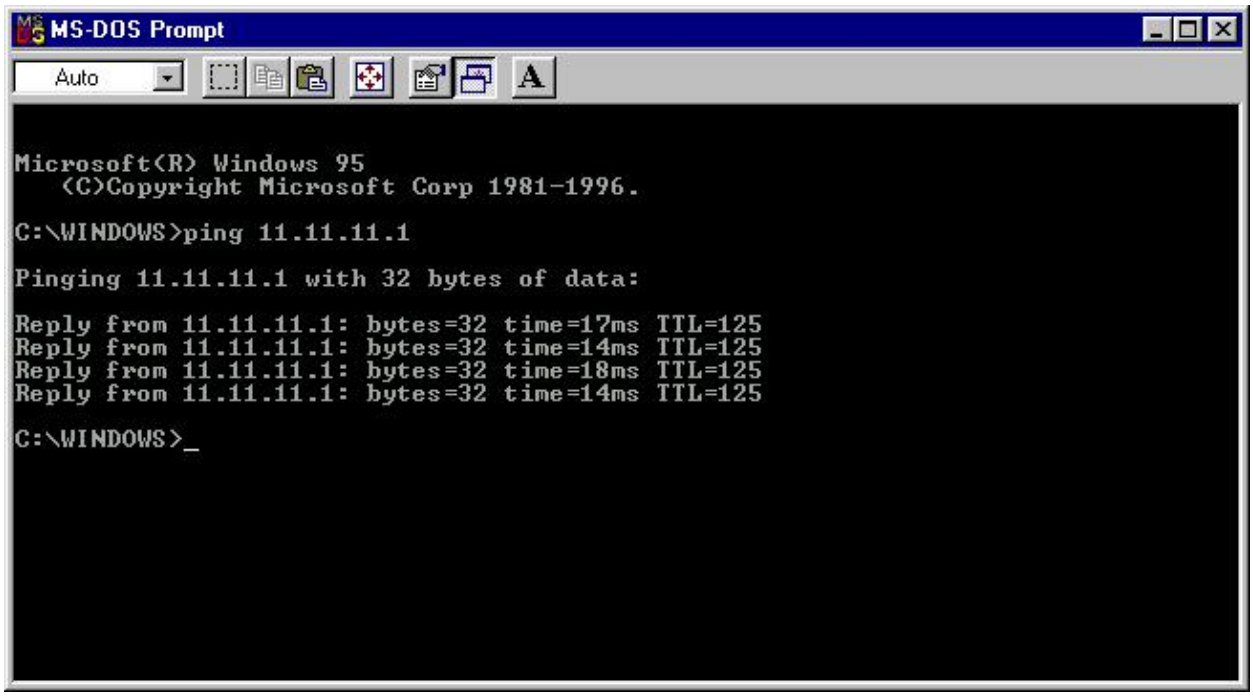
PC1 has an IP address of 9.9.9.1.



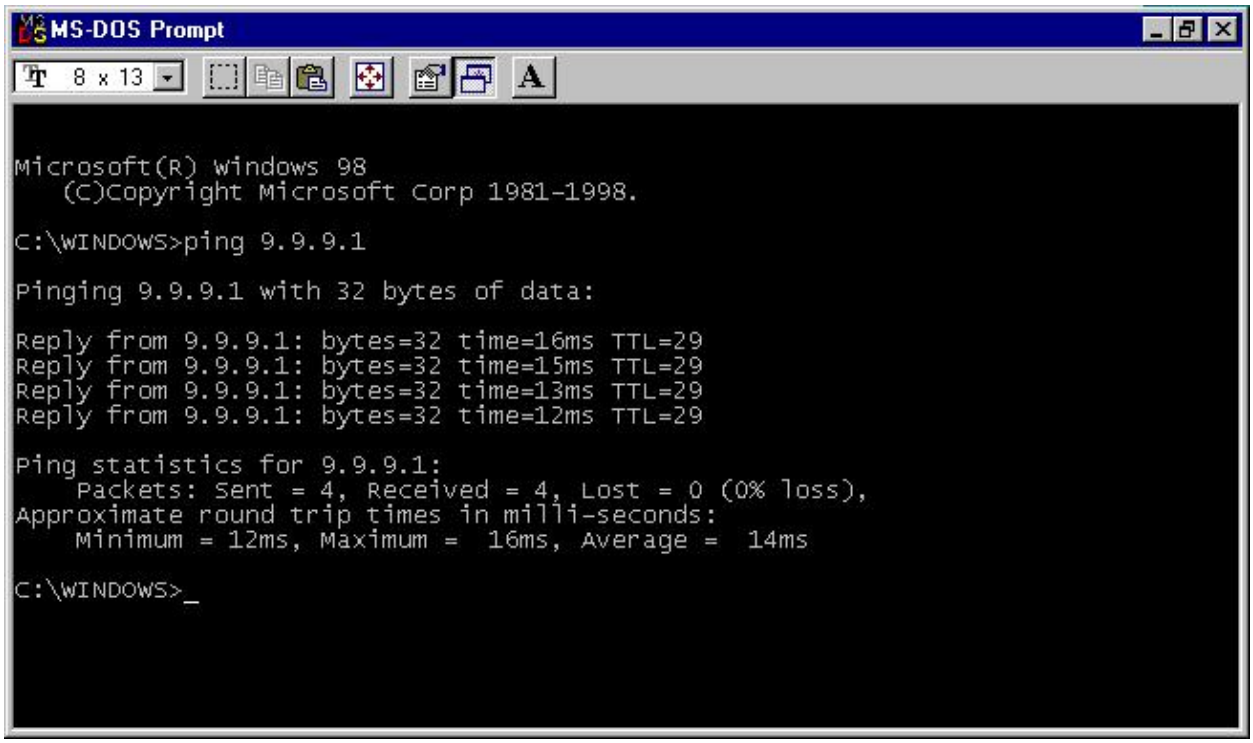
PC2 has and IP address of 11.11.11.1.



Ping from PC1 to PC2.



Ping from PC2 to PC1.



Troubleshoot

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

Related Information

- **Troubleshooting uBR Cable Modems Not Coming Online**
- **Configuring CET Encryption with a GRE Tunnel**
- **Technical Support − Cisco Systems**

Updated: Oct 04, 2005 Document ID: 12084