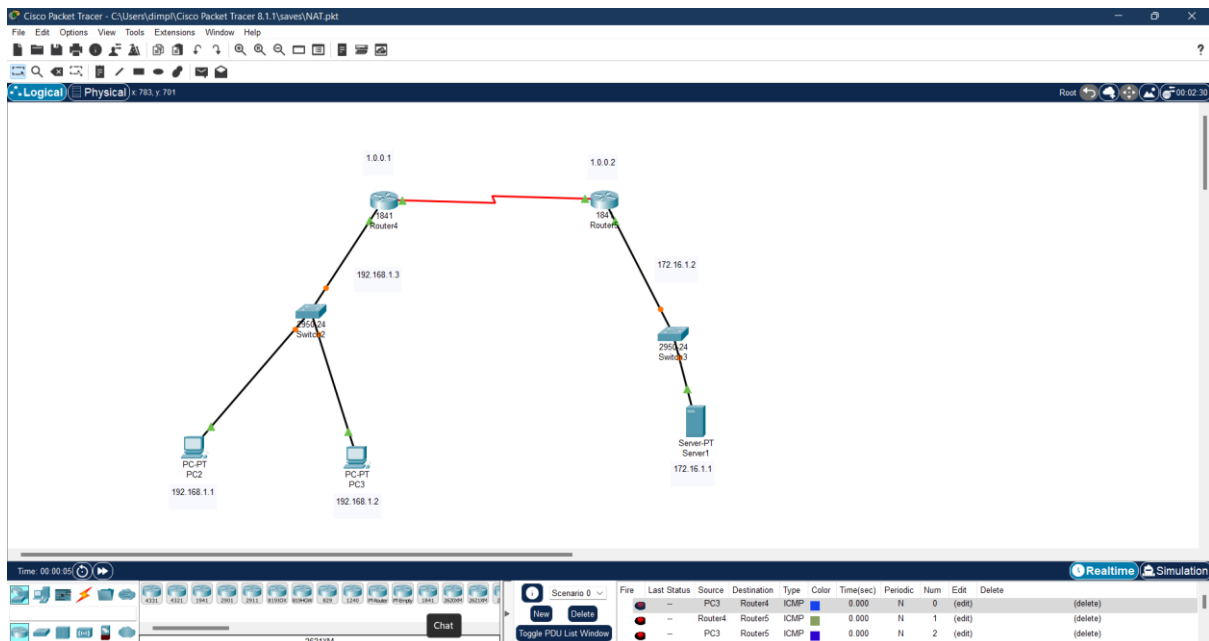


NETWORK TOPOLOGY DIAGRAM:



OUTPUT: (CLI COMMAND TAB):

```
Router4
Physical Config CLI Attributes
IOS Command Line Interface
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version
12.4(15)T1, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed
state to up

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

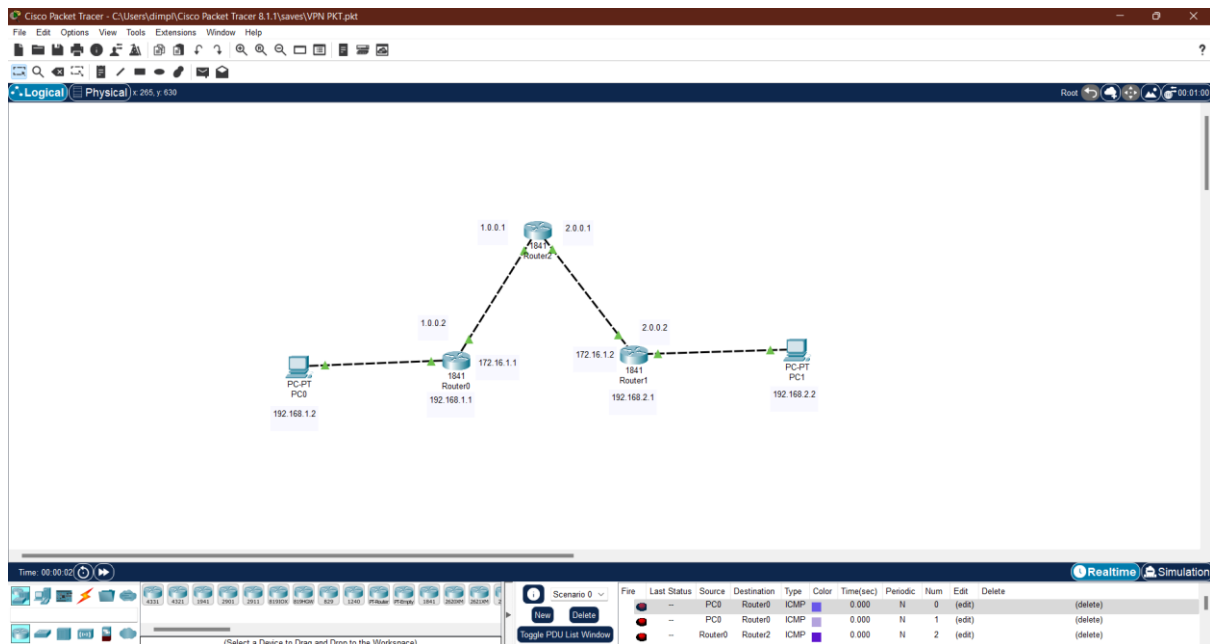
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to
up

Router>sh ip nat tr
Pro Inside global      Inside local      Outside local      Outside global
--- 1.0.0.1            192.168.1.2      ---              ---

Router>
```

RESULT:

NETWORK TOPOLOGY DIAGRAM:



OUTPUT: (CLI COMMAND TAB):

```
Router0
Physical Config CLI Attributes
IOS Command Line Interface

Press RETURN to get started!

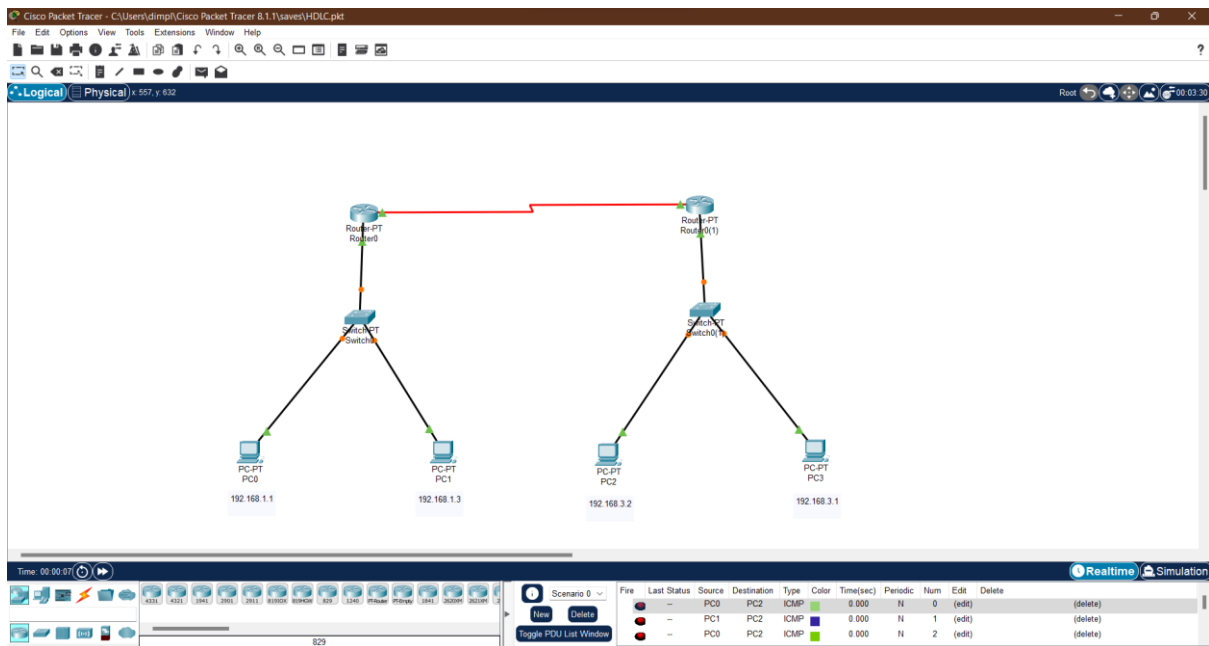
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Tunnel1, changed state to up

Router>show interfaces Tunnel 1
Tunnel1 is up, line protocol is up (connected)
Hardware is Tunnel
Internet address is 172.16.1.1/16
MTU 17916 bytes, BW 100 Kbit/sec, DLY 50000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation TUNNEL, loopback not set
Keepalive not set
Tunnel source 1.0.0.2 (FastEthernet0/1), destination 2.0.0.2
Tunnel protocol/transport GRE/IP
    Key disabled, sequencing disabled
    Checksumming of packets disabled
Tunnel TTL 255
Fast tunneling enabled
Tunnel transport MTU 1476 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 1
Queueing strategy: fifo
Output queue: 0/0 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
--More--

Ctrl+F6 to exit CLI focus
```

RESULT:

NETWORK TOPOLOGY DIAGRAM:



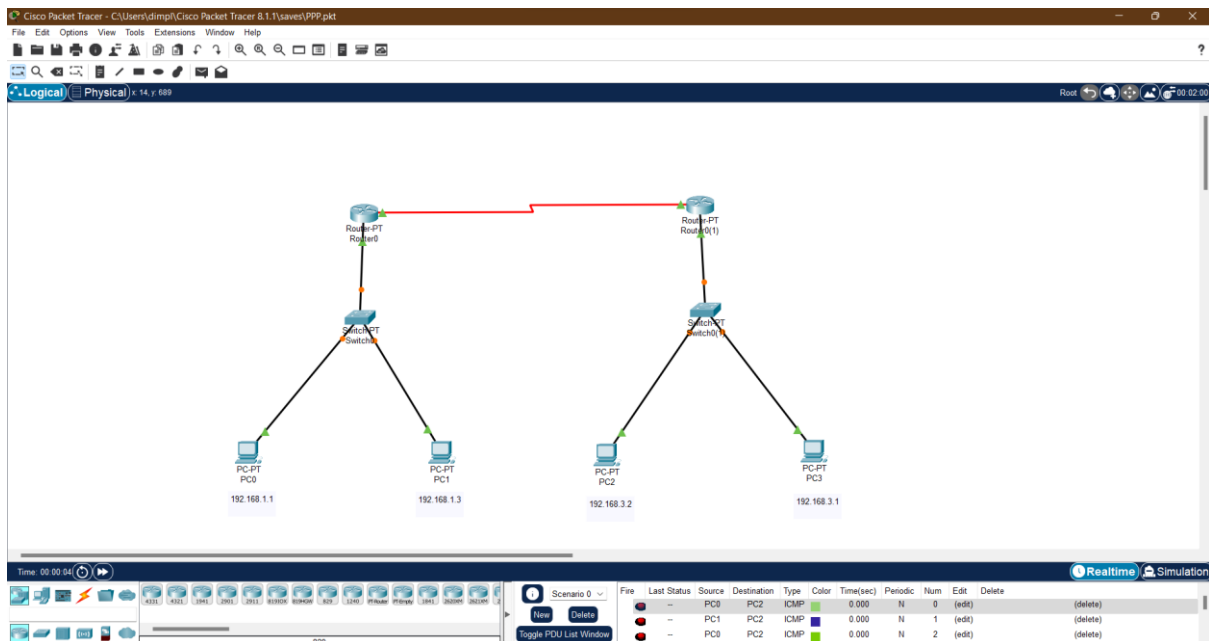
OUTPUT: (CLI COMMAND TAB):

```
Router0
Physical Config CLI Attributes
IOS Command Line Interface
$LINK-S-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router>show interface s2/0
Serial2/0 is up, line protocol is up (connected)
Hardware is HD64570
Internet address is 192.168.2.1/24
MTU 1500 bytes, BW 128 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation HDLC, loopback not set, keepalive set (10 sec)
Last input never, output never, output hang never
Last clearing of "show interface" counters never
Input queue: 0/75/0 (size/max/drops); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/0/256 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 96 kilobits/sec
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 4 bits/sec, 0 packets/sec
  0 packets input, 0 bytes, 0 no buffer
Received 0 broadcasts, 0 runs, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
  3 packets output, 156 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 output buffer failures, 0 output buffers swapped out
--More--
```

RESULT:

NETWORK TOPOLOGY DIAGRAM:



OUTPUT: (CLI COMMAND TAB):

```
Router0
Physical Config CLI Attributes
IOS Command Line Interface
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed
state to up

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to
up

r1>en
r1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
r1(config)#int s2/0
r1(config-if)#PPP authentication ?
  chap Challenge Handshake Authentication Protocol <CHAP>
  pap Password Authentication Protocol <PAP>
r1(config-if)#PPP authentication ?
  chap Challenge Handshake Authentication Protocol <CHAP>
  pap Password Authentication Protocol <PAP>
r1(config-if)#PPP authentication
```

RESULT: