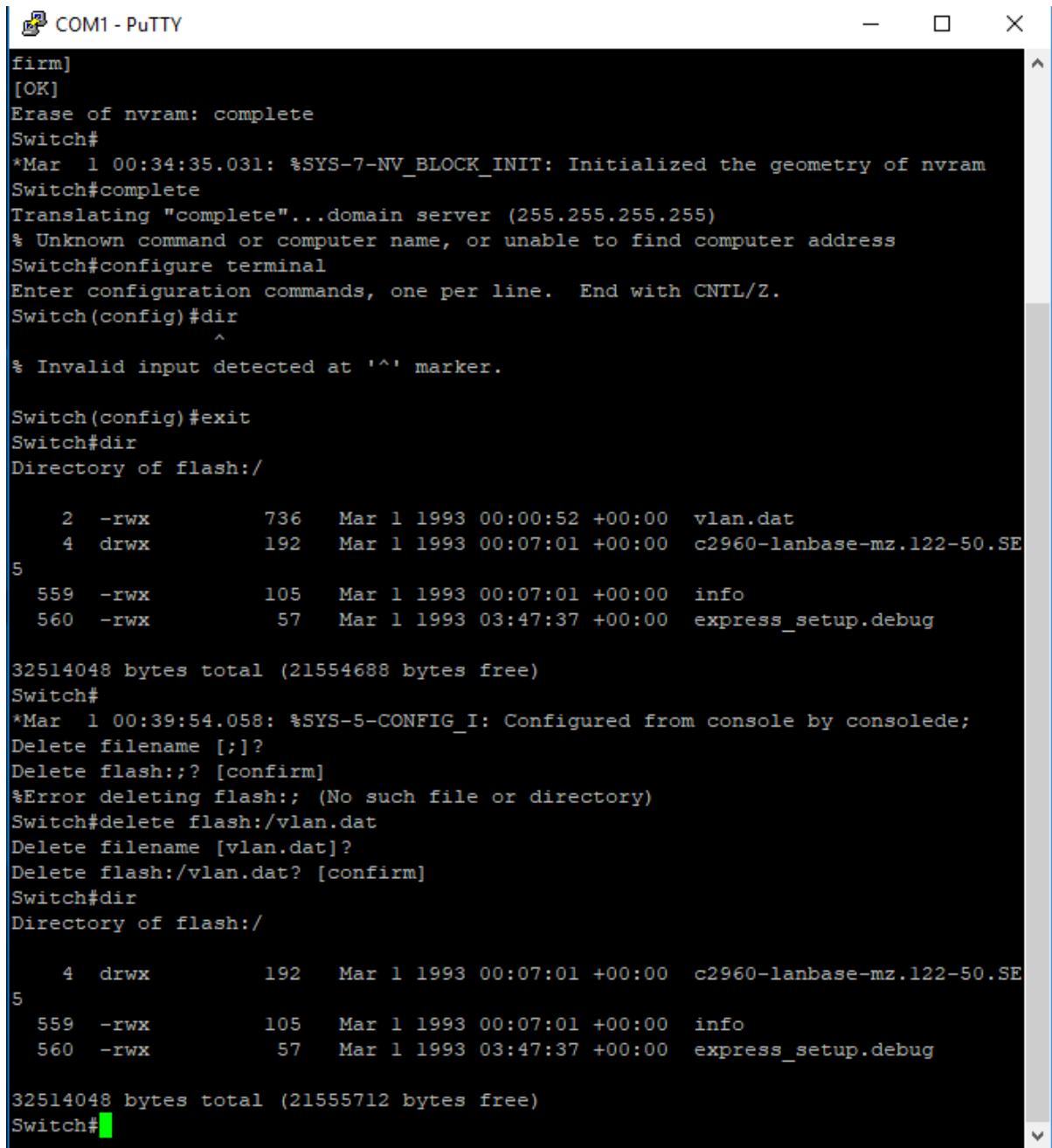از چهارم

گام 2:


```
firm]
[OK]
Erase of nvram: complete
Switch#
*Mar  1 00:34:35.031: %SYS-7-NV_BLOCK_INIT: Initialized the geometry of nvram
Switch#complete
Translating "complete"...domain server (255.255.255.255)
% Unknown command or computer name, or unable to find computer address
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#dir
                 ^
% Invalid input detected at '^' marker.

Switch(config)#exit
Switch#dir
Directory of flash:/

    2  -rwx          736   Mar 1 1993 00:00:52 +00:00   vlan.dat
    4  drwx          192   Mar 1 1993 00:07:01 +00:00   c2960-lanbase-mz.122-50.SE
5
  559  -rwx          105   Mar 1 1993 00:07:01 +00:00   info
  560  -rwx           57   Mar 1 1993 03:47:37 +00:00   express_setup.debug

32514048 bytes total (21554688 bytes free)
Switch#
*Mar  1 00:39:54.058: %SYS-5-CONFIG_I: Configured from console by consolede;
Delete filename [;]?
Delete flash:;? [confirm]
%Error deleting flash:; (No such file or directory)
Switch#delete flash:/vlan.dat
Delete filename [vlan.dat]?
Delete flash:/vlan.dat? [confirm]
Switch#dir
Directory of flash:/

    4  drwx          192   Mar 1 1993 00:07:01 +00:00   c2960-lanbase-mz.122-50.SE
5
  559  -rwx          105   Mar 1 1993 00:07:01 +00:00   info
  560  -rwx           57   Mar 1 1993 03:47:37 +00:00   express_setup.debug

32514048 bytes total (21555712 bytes free)
Switch#
```

```
  560   -rwx          57   Mar 1 1993 03:47:37 +00:00  express_setup.debug

32514048 bytes total (21555712 bytes free)
Switch#reload

System configuration has been modified. Save? [yes/no]: no
Proceed with reload? [confirm]

*Mar  1 00:42:40.169: %SYS-5-RELOAD: Reload requested by console. Reload reason:
 Reload command
Boot Sector Filesystem (bs) installed, fsid: 2
Base ethernet MAC Address: ec:el:a9:57:de:00
Xmodem file system is available.
```

<div dir="rtl">

گام 3:

</div>

```
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname Als2
Als2(config)#show interface status
                 ^
% Invalid input detected at '^' marker.

Als2(config)#show interfaces status
                ^
% Invalid input detected at '^' marker.

Als2(config)#do show interfaces status

Port         Name              Status       Vlan       Duplex  Speed Type
Fa0/1                          notconnect   1            auto   auto 10/100BaseTX
Fa0/2                          notconnect   1            auto   auto 10/100BaseTX
Fa0/3                          notconnect   1            auto   auto 10/100BaseTX
Fa0/4                          notconnect   1            auto   auto 10/100BaseTX
Fa0/5                          notconnect   1            auto   auto 10/100BaseTX
Fa0/6                          connected    1          a-full  a-100 10/100BaseTX
Fa0/7                          notconnect   1            auto   auto 10/100BaseTX
Fa0/8                          notconnect   1            auto   auto 10/100BaseTX
Fa0/9                          connected    1          a-full  a-100 10/100BaseTX
Fa0/10                         connected    1          a-full  a-100 10/100BaseTX
Fa0/11                         notconnect   1            auto   auto 10/100BaseTX
Fa0/12                         notconnect   1            auto   auto 10/100BaseTX
```

```
Fa0/10                        connected    1         a-full  a-100 10/100BaseTX
Fa0/11                        notconnect   1         auto    auto 10/100BaseTX
Fa0/12                        notconnect   1         auto    auto 10/100BaseTX
Fa0/13                        notconnect   1         auto    auto 10/100BaseTX
Fa0/14                        notconnect   1         auto    auto 10/100BaseTX
Fa0/15                        notconnect   1         auto    auto 10/100BaseTX
Fa0/16                        notconnect   1         auto    auto 10/100BaseTX
Fa0/17                        notconnect   1         auto    auto 10/100BaseTX
Fa0/18                        notconnect   1         auto    auto 10/100BaseTX
Fa0/19                        notconnect   1         auto    auto 10/100BaseTX
Fa0/20                        notconnect   1         auto    auto 10/100BaseTX
Fa0/21                        notconnect   1         auto    auto 10/100BaseTX
Fa0/22                        notconnect   1         auto    auto 10/100BaseTX
Fa0/23                        notconnect   1         auto    auto 10/100BaseTX
Fa0/24                        notconnect   1         auto    auto 10/100BaseTX
Gi0/1                         notconnect   1         auto    auto 10/100/1000Ba
seTX
Gi0/2                         notconnect   1         auto    auto 10/100/1000Ba
seTX
Als2(config)#interface range fast
Als2(config)#interface range fastEthernet 0/1-24, giga
Als2(config)#interface range fastEthernet 0/1-24, gigabitEthernet 0/1-2
Als2(config-if-range)#shu
Als2(config-if-range)#shutdown
Als2(config-if-range)#
*Mar  1 00:10:25.253: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, cha
nged state to down
*Mar  1 00:10:27.073: %LINK-5-CHANGED: Interface FastEthernet0/1, changed state
to administratively down
*Mar  1 00:10:27.090: %LINK-5-CHANGED: Interface FastEthernet0/2, changed state
to administratively down
*Mar  1 00:10:27.098: %LINK-5-CHANGED: Interface FastEthernet0/3, changed state
to administratively down
*Mar  1 00:10:27.107: %LINK-5-CHANGED: Interface FastEthernet0/4, changed state
```

```
 to administratively down
*Mar  1 00:10:27.191: %LINK-5-CHANGED: Interface FastEthernet0/14, changed state
 to administratively down
*Mar  1 00:10:27.199: %LINK-5-CHANGED: Interface FastEthernet0/15, changed state
 to administratively down
*Mar  1 00:10:27.207: %LINK-5-CHANGED: Interface FastEthernet0/16, changed state
 to administratively down
*Mar  1 00:10:27.216: %LINK-5-CHANGED: Interface FastEthernet0/17, changed state
 to administratively down
*Mar  1 00:10:27.224: %LINK-5-CHANGED: Interface FastEthernet0/18, changed state
 to administratively down
*Mar  1 00:10:27.232: %LINK-5-CHANGED: Interface FastEthernet0/19, changed state
 to administratively down
*Mar  1 00:10:27.241: %LINK-5-CHANGED: Interface FastEthernet0/20, changed state
 to administratively down
*Mar  1 00:10:27.249: %LINK-5-CHANGED: Interface FastEthernet0/21, changed state
 to administratively down
*Mar  1 00:10:27.274: %LINK-5-CHANGED: Interface FastEthernet0/22, changed state
 to administratively down
*Mar  1 00:10:27.283: %LINK-5-CHANGED: Interface FastEthernet0/23, changed state
 to administratively down
*Mar  1 00:10:27.291: %LINK-5-CHANGED: Interface FastEthernet0/24, changed state
 to administratively down
*Mar  1 00:10:27.291: %LINK-5-CHANGED: Interface GigabitEthernet0/1, changed sta
te to administratively down
*Mar  1 00:10:27.300: %LINK-5-CHANGED: Interface GigabitEthernet0/2, changed sta
te to administratively down
*Mar  1 00:10:28.122: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/6, changed state to down
*Mar  1 00:10:28.155: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/9, changed state to down
*Mar  1 00:10:28.164: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/10, changed state to down
Als2(config-if-range)#
```

```
to administratively down
*Mar  1 00:10:27.291: %LINK-5-CHANGED: Interface FastEthernet0/24, changed state
 to administratively down
*Mar  1 00:10:27.291: %LINK-5-CHANGED: Interface GigabitEthernet0/1, changed sta
te to administratively down
*Mar  1 00:10:27.300: %LINK-5-CHANGED: Interface GigabitEthernet0/2, changed sta
te to administratively down
*Mar  1 00:10:28.122: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/6, changed state to down
*Mar  1 00:10:28.155: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/9, changed state to down
*Mar  1 00:10:28.164: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthern
et0/10, changed state to down
Als2(config-if-range)#vtp mode tran
Als2(config-if-range)#vtp mode transparent
Setting device to VTP TRANSPARENT mode.
% Command exited out of interface range and its sub-modes.
  Not executing the command for second and later interfaces
Als2(config)#no ip domain lookup
Als2(config)#
```

```
Als2(config)#interface range fastEthernet 0/9-10
Als2(config-if-range)#cha
Als2(config-if-range)#channel-gr
Als2(config-if-range)#channel-group 3 mode de
Als2(config-if-range)#channel-group 3 mode desirable
Creating a port-channel interface Port-channel 3

Als2(config-if-range)#inter
Als2(config-if-range)#interface port-ch
Als2(config-if-range)#interface port-channel 3
% Command exited out of interface range and its sub-modes.
  Not executing the command for second and later interfaces
Als2(config-if)#interface range fastEthernet 0/9-10
Als2(config-if-range)#channel-pr
Als2(config-if-range)#channel-protocol pagp
Als2(config-if-range)#channel-group 3 mode desirable
Als2(config-if-range)#inter
Als2(config-if-range)#interface port-channel 3
% Command exited out of interface range and its sub-modes.
  Not executing the command for second and later interfaces
Als2(config-if)#
```

```
Als2#show etherchannel summary
Flags:  D - down         P - bundled in port-channel
        I - stand-alone s - suspended
        H - Hot-standby (LACP only)
        R - Layer3       S - Layer2
        U - in use       f - failed to allocate aggregator

        M - not in use, minimum links not met
        u - unsuitable for bundling
        w - waiting to be aggregated
        d - default port


Number of channel-groups in use: 1
Number of aggregators:           1

Group  Port-channel  Protocol    Ports
------+-------------+-----------+-----------------------------------------------
3      Po3(SD)         PAgP      Fa0/9(D)    Fa0/10(D)

Als2#
```

```
Als2(config)#vlan 99
Als2(config-vlan)#name Management
Als2(config-vlan)#vlan 200
Als2(config-vlan)#name Engineering
```

```
Als2(config)#vlan 99
Als2(config-vlan)#name Management
Als2(config-vlan)#do show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gi0/1, Gi0/2
99   Management                       active
200  Engineering                      active
1002 fddi-default                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
99   enet  100099     1500  -      -      -        -    -        0      0
200  enet  100200     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
1005 trnet 101005     1500  -      -      -        ibm  -        0      0

Remote SPAN VLANs
------------------------------------------------------------------------------


Primary Secondary Type              Ports
------- --------- ----------------- ----------------------------------------

Als2(config-vlan)#
Als2(config-vlan)#
```

```
Als2(config)#
Als2(config)#in
Als2(config)#interface fas
Als2(config)#interface fastEthernet 0/9
Als2(config-if)#sw
Als2(config-if)#switchport mode trunk
Als2(config-if)#exit
Als2(config)#interface fastEthernet 0/10
Als2(config-if)#switchport mode trunk
Als2(config-if)#exit
```

```
Als2(config)#interface fastEthernet 0/9
Als2(config-if)#no sh
Als2(config-if)#no shutdown
```

```
Als2(config-if)#interface fastEthernet 0/10
Als2(config-if)#no sh
Als2(config-if)#no shutdown
```

```
Als2(config-if)#interface fastEthernet 0/6
Als2(config-if)#no sh
Als2(config-if)#no shutdown
Als2(config-if)#do show interface status

Port      Name              Status      Vlan     Duplex  Speed Type
Fa0/1                       disabled    1          auto   auto 10/100BaseTX
Fa0/2                       disabled    1          auto   auto 10/100BaseTX
Fa0/3                       disabled    1          auto   auto 10/100BaseTX
Fa0/4                       disabled    1          auto   auto 10/100BaseTX
Fa0/5                       disabled    1          auto   auto 10/100BaseTX
Fa0/6                       connected   200       a-full  a-100 10/100BaseTX
Fa0/7                       disabled    1          auto   auto 10/100BaseTX
Fa0/8                       disabled    1          auto   auto 10/100BaseTX
Fa0/9                       connected   trunk     a-full  a-100 10/100BaseTX
Fa0/10                      connected   trunk     a-full  a-100 10/100BaseTX
Fa0/11                      disabled    1          auto   auto 10/100BaseTX
Fa0/12                      disabled    1          au
*Mar  1 01:27:35.127: %LINK-3-UPDOWN: Interface FastEthernet0/6, changed state to up
*Mar  1 01:27:36.150: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to upto   auto 10/100BaseTX
Fa0/13                      disabled    1          auto   auto 10/100BaseTX
Fa0/14                      disabled    1          auto   auto 10/100BaseTX
Fa0/15                      disabled    1          auto   auto 10/100BaseTX
Fa0/16                      disabled    1          auto   auto 10/100BaseTX
Fa0/17                      disabled    1          auto   auto 10/100BaseTX
Fa0/18                      disabled    1          auto   auto 10/100BaseTX
Fa0/19                      disabled    1          auto   auto 10/100BaseTX
Fa0/20                      disabled    1          auto   auto 10/100BaseTX
Fa0/21                      disabled    1          auto   auto 10/100BaseTX
Fa0/22                      disabled    1          auto   auto 10/100BaseTX
Fa0/23                      disabled    1          auto   auto 10/100BaseTX
Fa0/24                      disabled    1          auto   auto 10/100BaseTX
Gi0/1                       disabled    1          auto   auto 10/100/1000BaseTX
Gi0/2                       disabled    1          auto   auto 10/100/1000BaseTX
Po3                         connected   trunk     a-full  a-100
Als2(config-if)#
Als2(config-if)#
```

```
Als2(config-if)#
Als2(config-if)#interface fastEthernet 0/10
Als2(config-if)#des
Als2(config-if)#description "connected to server"
Als2(config-if)#exit
Als2(config)#interface fastEthernet 0/9
Als2(config-if)#description "connected to server"
Als2(config-if)#exit
Als2(config)#interface fastEthernet 0/6
Als2(config-if)#description "connected to client"
Als2(config-if)#exit
Als2(config)#do show interface status

Port      Name                  Status      Vlan      Duplex  Speed Type
Fa0/1                           disabled    1           auto   auto 10/100BaseTX
Fa0/2                           disabled    1           auto   auto 10/100BaseTX
Fa0/3                           disabled    1           auto   auto 10/100BaseTX
Fa0/4                           disabled    1           auto   auto 10/100BaseTX
Fa0/5                           disabled    1           auto   auto 10/100BaseTX
Fa0/6     "connected to clie    connected   200        a-full  a-100 10/100BaseTX
Fa0/7                           disabled    1           auto   auto 10/100BaseTX
Fa0/8                           disabled    1           auto   auto 10/100BaseTX
Fa0/9     "connected to serv    connected   trunk      a-full  a-100 10/100BaseTX
Fa0/10    "connected to serv    connected   trunk      a-full  a-100 10/100BaseTX
Fa0/11                          disabled    1           auto   auto 10/100BaseTX
Fa0/12                          disabled    1           auto   auto 10/100BaseTX
Fa0/13                          disabled    1           auto   auto 10/100BaseTX
Fa0/14                          disabled    1           auto   auto 10/100BaseTX
Fa0/15                          disabled    1           auto   auto 10/100BaseTX
Fa0/16                          disabled    1           auto   auto 10/100BaseTX
Fa0/17                          disabled    1           auto   auto 10/100BaseTX
Fa0/18                          disabled    1           auto   auto 10/100BaseTX
Fa0/19                          disabled    1           auto   auto 10/100BaseTX
Fa0/20                          disabled    1           auto   auto 10/100BaseTX
Fa0/21                          disabled    1           auto   auto 10/100BaseTX
Fa0/22                          disabled    1           auto   auto 10/100BaseTX
Fa0/23                          disabled    1           auto   auto 10/100BaseTX
Fa0/24                          disabled    1           auto   auto 10/100BaseTX
Gi0/1                           disabled    1           auto   auto 10/100/1000BaseTX
Gi0/2                           disabled    1           auto   auto 10/100/1000BaseTX
Po3                             connected   trunk      a-full  a-100
Als2(config)#
```

```
Als2(config)#interface vlan 99
Als2(config-if)#ip address 172.16.99.102 255.255.255.0
Als2(config-if)#no
Als2(config-if)#no sh
Als2(config-if)#no shutdown
Als2(config-if)#interface vlan 200
Als2(config-if)#ip address 172.16.200.101 255.255.255.0
Als2(config-if)#no shutdown
Als2(config-if)#
```

پینگ هایی که گرفته شد موفقیت امیز نبود بخاطر این که هنوز DLS ، ip routing نشده بود.
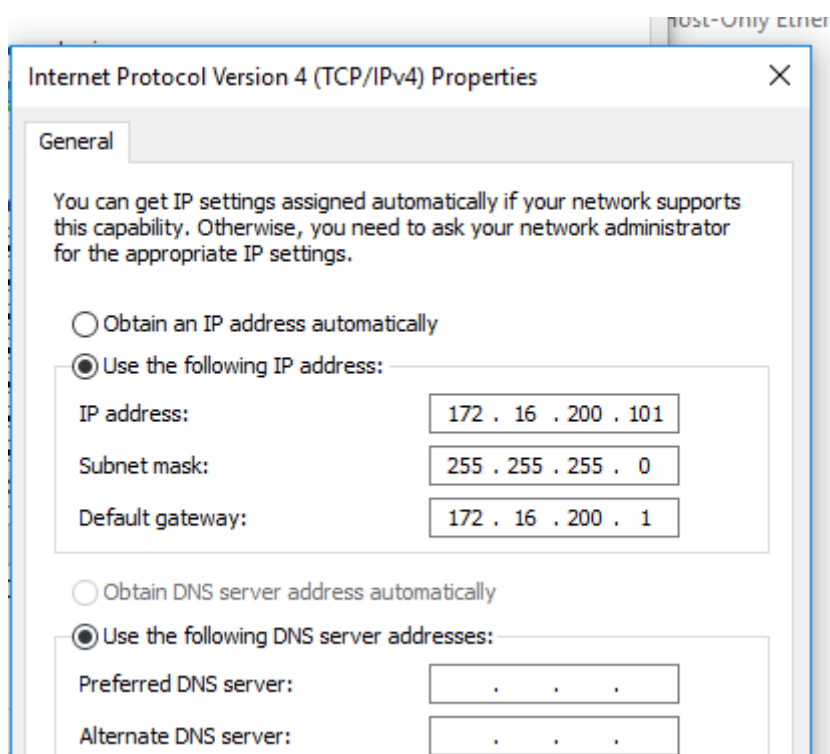
گام 7:

DLS:

```
DLS_1(config)#ip routing
DLS_1(config)#interface vlan99
DLS_1(config-if)#ip default-gateway 172.16.99.1
DLS_1(config)#
```

ALS:

```
Als2(config)#exit
Als2#enable
*Mar  1 02:59:34.009: %SYS-5-CONFIG_I: Configured from console by console
Als2#ping 172.16.99.1

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.99.1, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/203/1007 ms
Als2#
```

پینگ هایی که گرفته شد موفقیت امیز بوده بخاطر اینکه در گام پیش سوییچ لایه سوم ip routing شده است

:DLS

```
DLS_1(config)#ip dhcp excluded-address 10.1.10.1 10.1.10.20
DLS_1(config)#ip dhcp pool dls-pool
DLS_1(dhcp-config)#ip dhcp excluded-address 172.16.100.1 172.16.200.1
DLS_1(config)#network 172.16.100.1 255.255.255.0
                    ^
% Invalid input detected at '^' marker.

DLS_1(config)#network 172.16.200.1 255.255.255.0
                    ^
% Invalid input detected at '^' marker.

DLS_1(config)#network 172.16.99.1 255.255.255.0
                    ^
% Invalid input detected at '^' marker.

DLS_1(config)#network 172.16.100.0 255.255.255.0
                    ^
% Invalid input detected at '^' marker.

DLS_1(config)#ip dhcp excluded-address 172.16.100.1 172.16.200.1
DLS_1(config)#ip dhcp pool dls-pool
DLS_1(dhcp-config)#network 172.16.100.0 255.255.255.0
DLS_1(dhcp-config)#default-router 172.16.100.1
DLS_1(dhcp-config)#network 172.16.200.0 255.255.255.0
DLS_1(dhcp-config)#default-router 172.16.200.1
DLS_1(dhcp-config)#
```

:ALS

```
C:\Users\netlab12>ipconfig

Windows IP Configuration


Ethernet adapter Ethernet 2:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::c9d2:eca3:c1aa:23ca%7
   IPv4 Address. . . . . . . . . . . : 192.168.56.1
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :

Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::a940:e449:5fbe:a931%5
   Autoconfiguration IPv4 Address. . : 169.254.169.49
   Subnet Mask . . . . . . . . . . . : 255.255.0.0
   Default Gateway . . . . . . . . . : 172.16.200.1

C:\Users\netlab12>
```

```
C:\Users\netlab12>ipconfig

Windows IP Configuration


Ethernet adapter Ethernet 2:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::c9d2:eca3:c1aa:23ca%7
   IPv4 Address. . . . . . . . . . . : 192.168.56.1
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :

Ethernet adapter Ethernet:

   Connection-specific DNS Suffix  . :
   Link-local IPv6 Address . . . . . : fe80::a940:e449:5fbe:a931%5
   IPv4 Address. . . . . . . . . . . : 172.16.200.101
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : 172.16.200.1
```