ASSIGNMENT FRONT SHEET

Qualification	**BTEC Level 5 HND Diploma in Computing**		
Unit number and title	**Unit 2: Networking Infrastructure**		
Submission date		**Date Received 1st submission**	
Re-submission Date		**Date Received 2nd submission**	
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Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

Student's signature	Duy

Grading grid

P1	P2	P3	P4	P5	P6	P7	P8	M1	M2	M3	M4	D1	D2	D3
				✓	✓	✓	✓							

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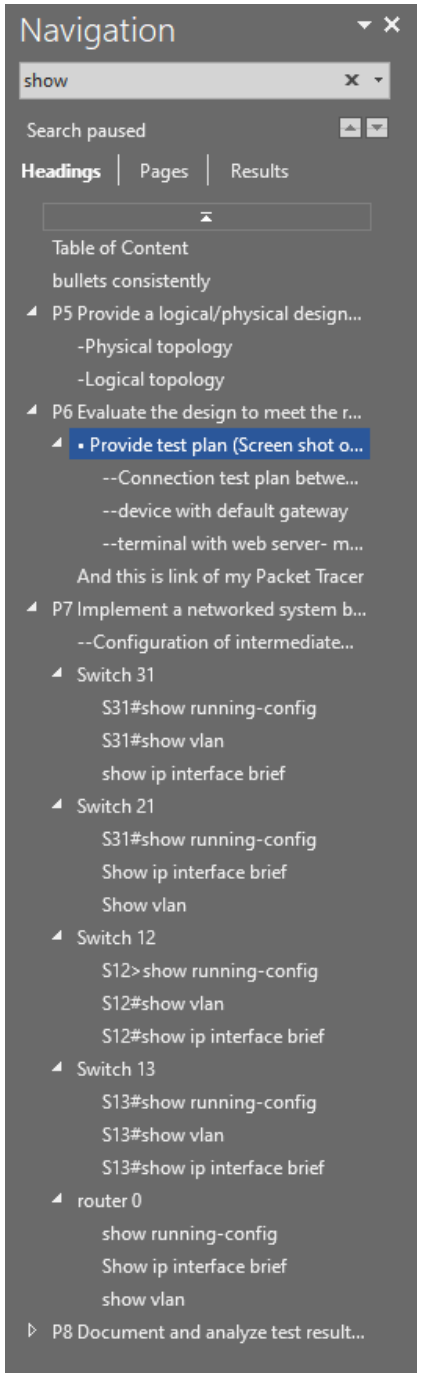
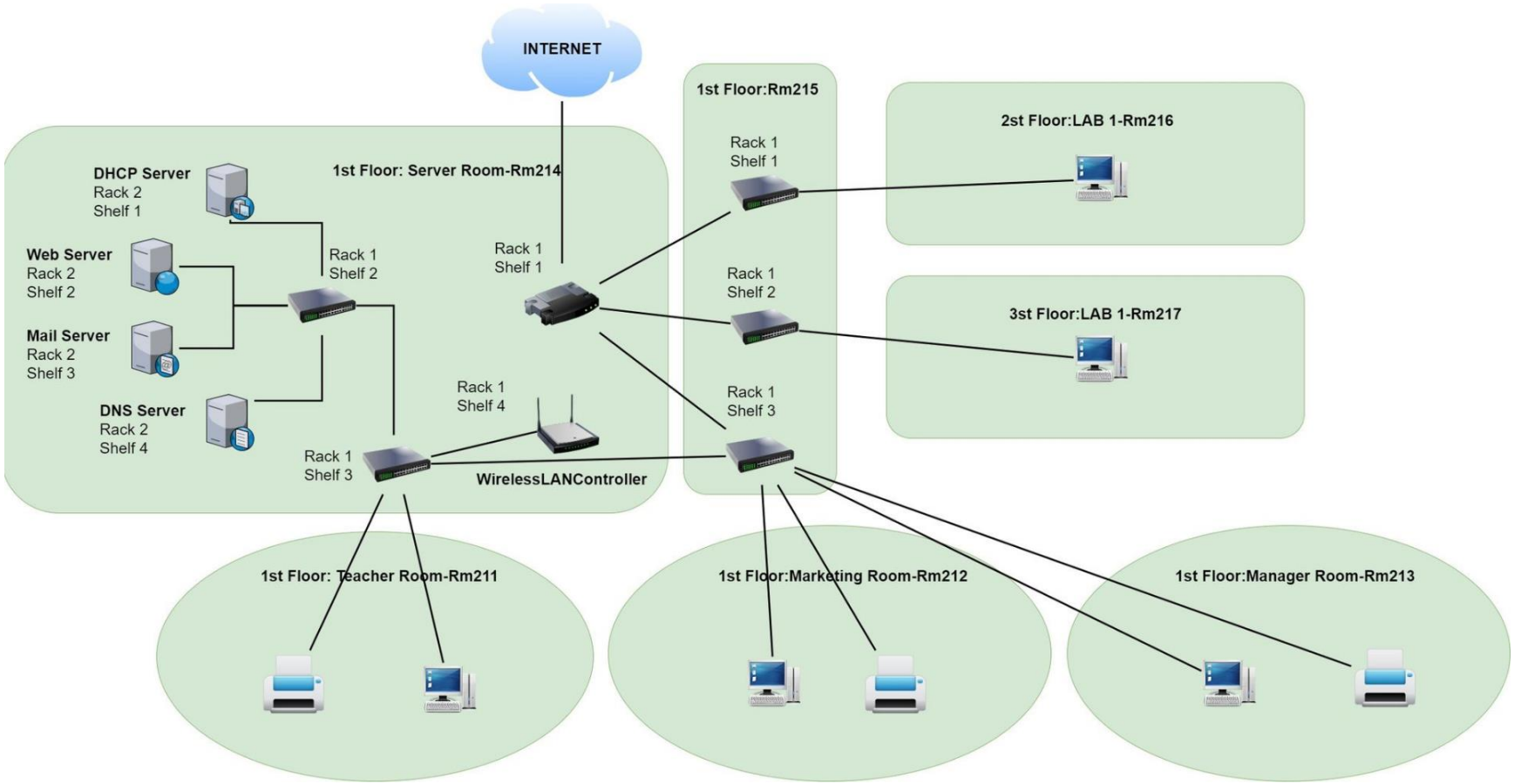


P5 Provide a logical/physical design of the networked system with clear explanation and addressing table

***Vẽ 1 cái Network

- Explain the difference between logical and physical design

-Physical topology



Prepare:

- Floor 1:
  - ✓ VLAN 10: NetworkAdministrator-3 PC + 4 servers.
  - ✓ VLAN 20:Marketing-12 PC + 1 printer.
  - ✓ VLAN 30:Teacher-15 PC+ 1 printer.

- ✓ VLAN 40:Manager-5 PC+ 1 printer.
- ✓ VLAN 70:Wireless Access Point(WAP), for all staffs and teachers.

- Floor 2:
  - ✓ VLAN50: LAB1-50 PC.
- Floor 3:
  - ✓ VLAN60: LAB2-50 PC.
- Devices:
  - ✓ Network devices: Router + 3 switch 24-port (Floor 1) + 2 switch 24-port(Floor 2) + 2 switch 24-port(Floor 3) + 1 WAP(Floor 2) + 1 WAP (Floor 3)
  - ✓ End Devices:
    - ✓ VLAN10: 3PC+ DHCP server+ DNS server+ Web server+ Mail server.

-Logical topology

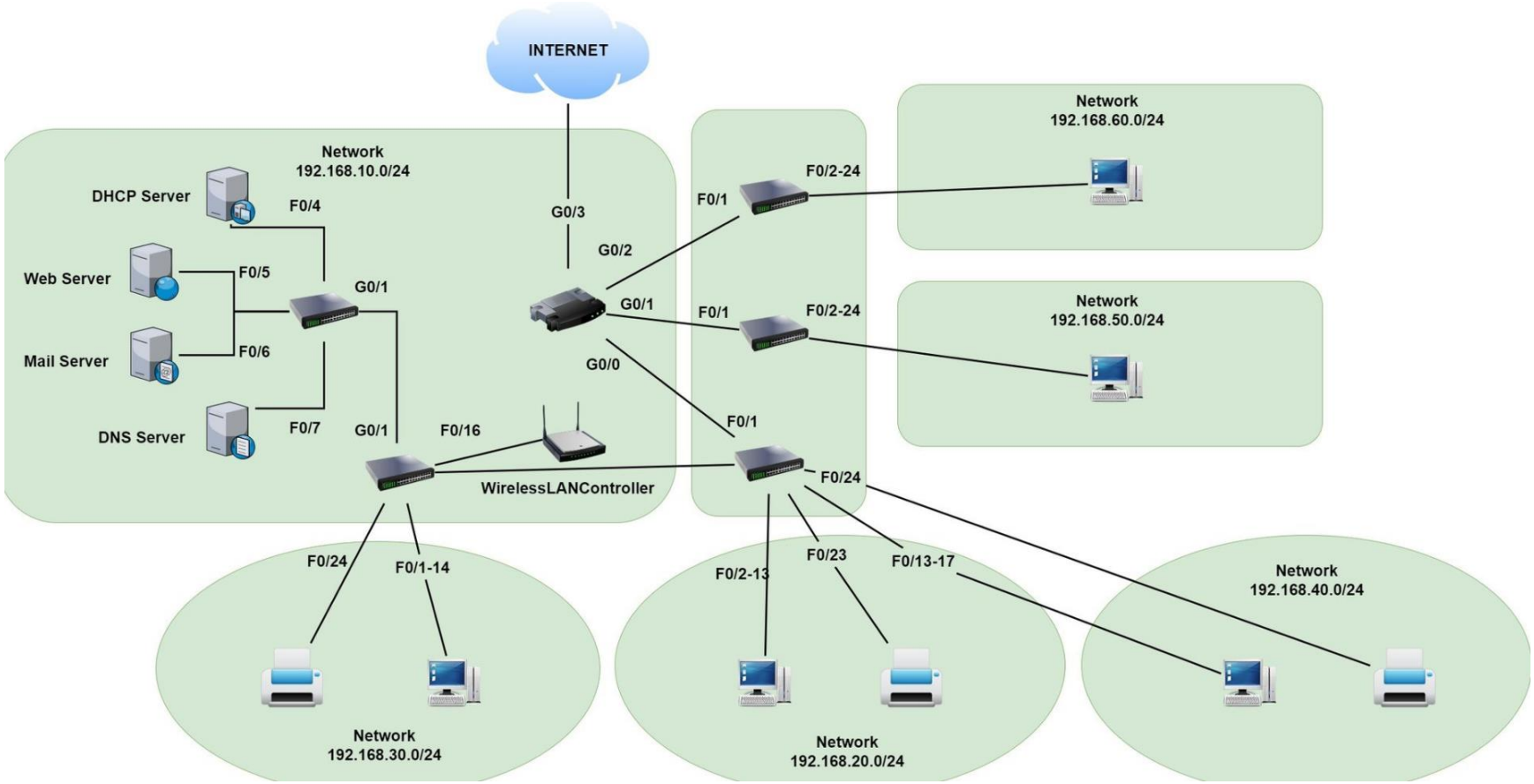
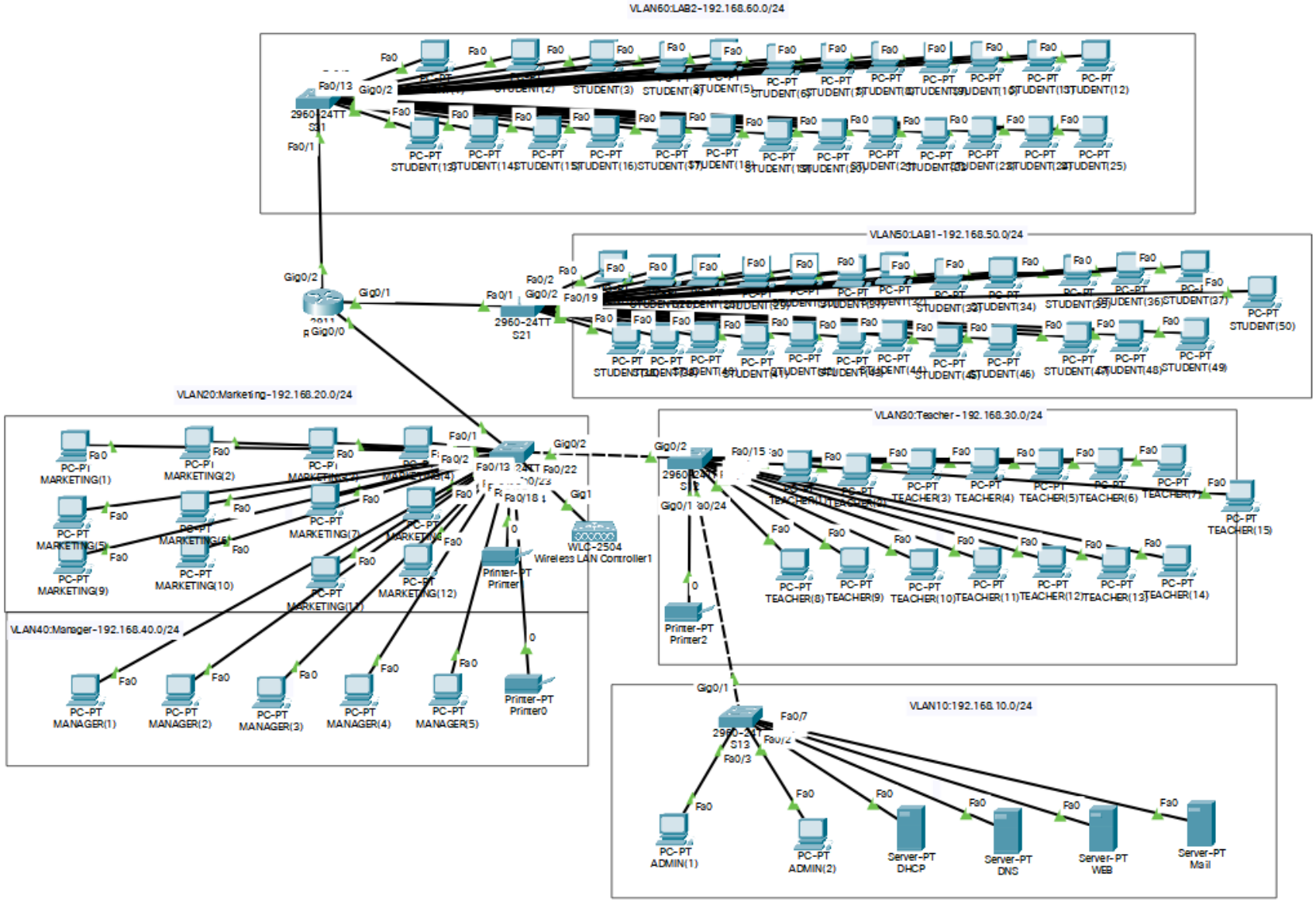


Table of IP addresses for devices :

Devices	Port	IP	Network mask	Default gateway

Router	GigabitEthernet0/0.10	192.168.10.1	255.255.255.0	N
	GigabitEthernet0/0.20	192.168.20.1	255.255.255.0	N
	GigabitEthernet0/0.30	192.168.30.1	255.255.255.0	N
	GigabitEthernet0/0.40	192.168.40.1	255.255.255.0	N
DHCP Server	FastEthernet0	192.168.10.101	255.255.255.0	192.168.10.1
DNS Server	FastEthernet0	192.168.10.102	255.255.255.0	192.168.10.1
WEB Server	FastEthernet0	192.168.10.103	255.255.255.0	192.168.10.1
Mail Server	FastEthernet0	192.168.10.104	255.255.255.0	192.168.10.1
Computer vlan10	Using DHCP service with network ID 192.168.10.0/24			192.168.10.1
Computer vlan20	Using DHCP service with network ID 192.168.20.0/24			192.168.20.1
Computer vlan30	Using DHCP service with network ID 192.168.30.0/24			192.168.30.1

Computer vlan40	Using DHCP service with network ID 192.168.40.0/24	192.168.40.1
Computer vlan50	Using DHCP service with network ID 192.168.50.0/24	192.168.50.1
Computer vlan60	Using DHCP service with network ID 192.168.60.0/24	192.168.60.1



This project too big

- Discuss and explain the USER Requirement for the network design

• Provide a logical design of the network base on user requirement

• Provide a physical design of the network based on user requirement

• Provide addressing table for the network you design.

P6 Evaluate the design to meet the requirements.

• Provide test plan (Screen shot of evidence of test such as ping, traceroute, SSH test – connectivity test etc.)

I will test::

With ping & traceroute command

Table Testing

Tesing for ::	**Command**
Router GigabitEthernet0/0.10	**Ping** 192.168.10.1
Router GigabitEthernet0/0.20	**Ping** 192.168.20.1
Router GigabitEthernet0/0.30	**Ping** 192.168.30.1
Router GigabitEthernet0/0.40	**Ping** 192.168.40.1
DHCP server	**Ping** 192.168.10.101
DNS server	**Ping** 192.168.10.102
Web server	**Ping** 192.168.10.103
Mail Server	**Ping** 192.168.10.104

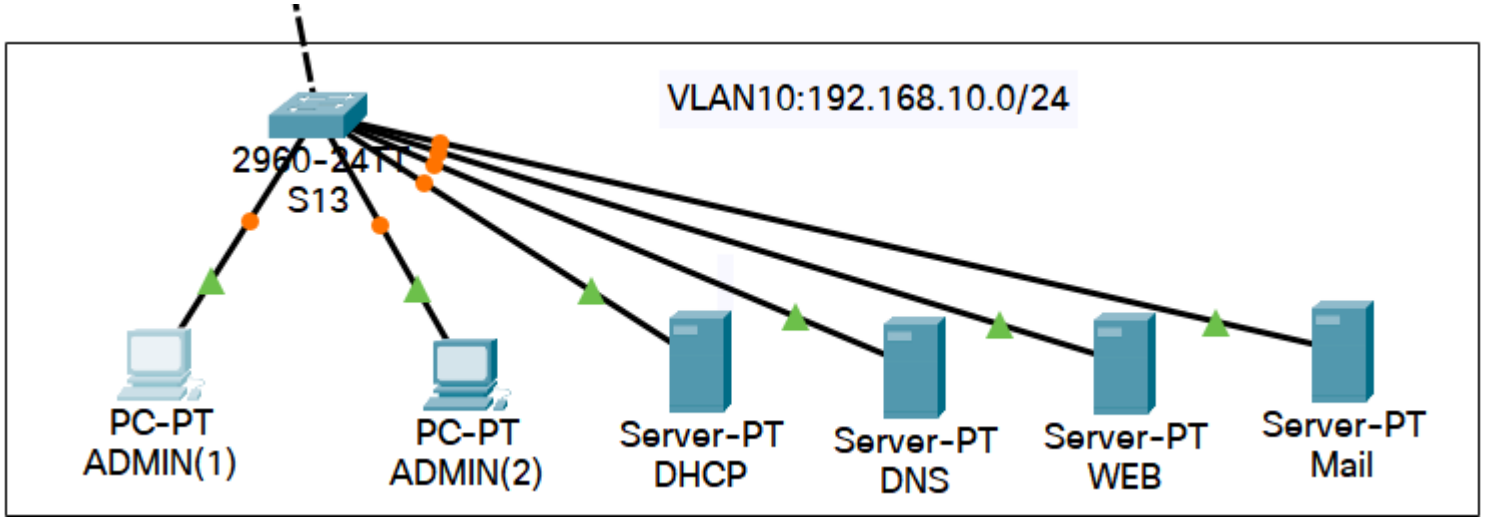
Computer vlan 10 (There 2 computers- 4 server)	**Ping** 192.168.10.1
Computer vlan 20 (There 25 computers)	**Ping** 192.168.20.1
Computer vlan 30 (There 15 computer for teacher)	**Ping** 192.168.30.1
Computer vlan 40 (There 5 computers, 1 printer)	**Ping** 192.168.40.1
Computer vlan 50 (There 25 computers)	**Ping** 192.168.50.1
Computer vlan 60 (There 25 computers)	**Ping** 192.168.60.1

--Connection test plan between devices,

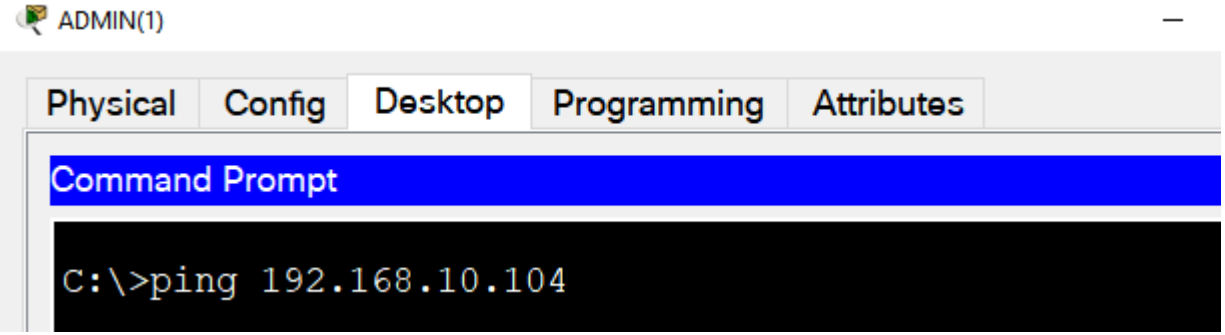
Some examples

Pc to Pc

1. **Step 1 click on PC admin**

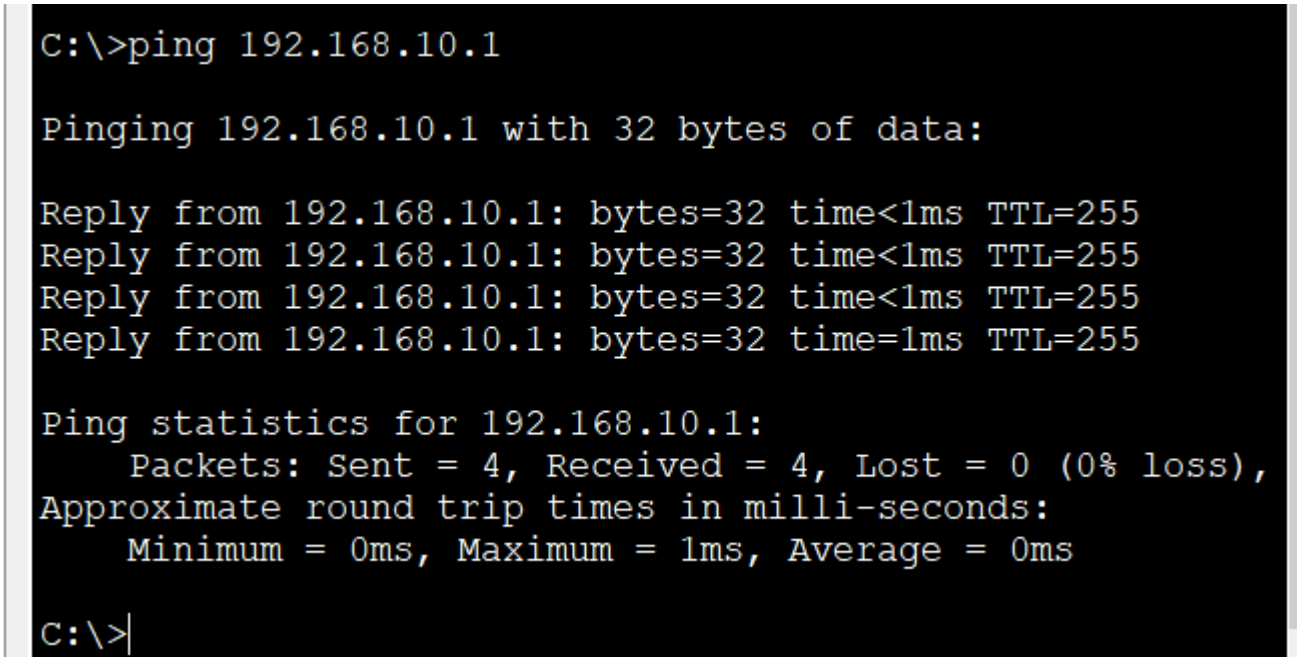


2. **Step 2: Go to Desktop for testing stuff**



--device with default gateway

Ping 192.168.10.1



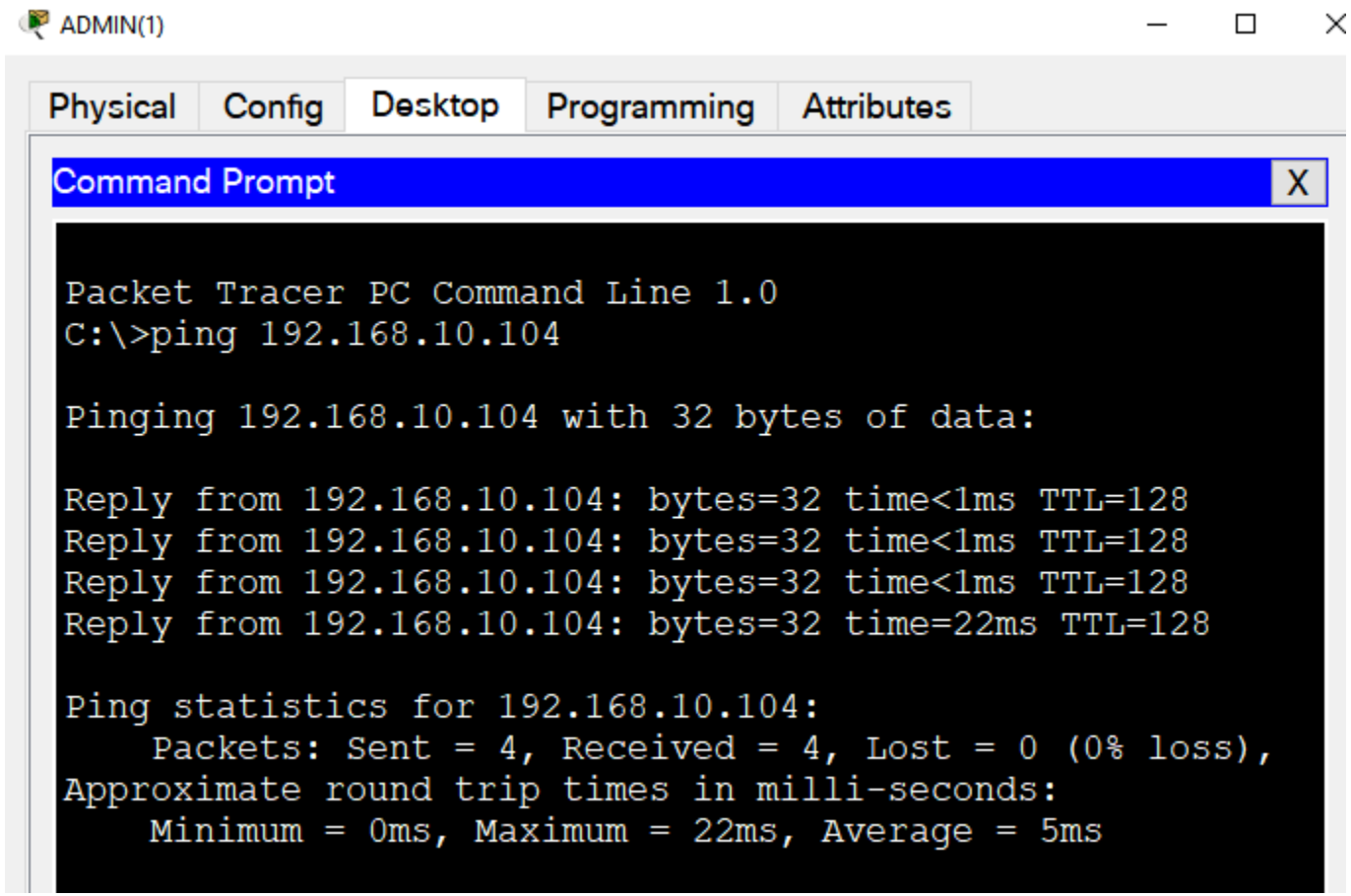
--terminal with web server- mail server-file server-DHCP server-DNS server

Ping 192.168.10.101

Ping 192.168.10.102

Ping 192.168.10.103

Ping 192.168.10.104



And this is link of my Packet Tracer

https://drive.google.com/file/d/1IAArfol9T_KLLoY12TvrvnrMUE-SEBAE/view?usp=sharing

Out of list --

• Evaluate the design of the network

o Show limitation of your design based on the user requirement and the strength

o What advice and solution would you provide to the network for efficiency and usage.

P7 Implement a networked system based on a prepared design.

• Show evidence of a working network you've design

--Configuration of end devices: Host Server, Pc, Laptop, Printer,etc

PC, Laptop

-Student

-Manager

-- Host Server

Printer

--Configuration of intermediate devices: switch, router, wireless access point, etc

With Show running-config, show vlan, show ip interface brief

switch,

Switch 31

S31#show running-config

Building configuration...

Current configuration : 2388 bytes

```
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S31
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport access vlan 60
switchport mode trunk
!
interface FastEthernet0/2
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/3
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/4
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/5
switchport access vlan 60
switchport mode access
```

```
!
interface FastEthernet0/6
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/7
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/8
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/9
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/10
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/11
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/12
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/13
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/14
switchport access vlan 60
```

```
switchport mode access
!
interface FastEthernet0/15
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/16
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/17
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/18
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/19
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/20
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/21
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/22
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/23
```

```
switchport access vlan 60
switchport mode access
!
interface FastEthernet0/24
switchport access vlan 60
switchport mode access
!
interface GigabitEthernet0/1
switchport access vlan 60
!
interface GigabitEthernet0/2
switchport access vlan 60
!
interface Vlan1
no ip address
shutdown
!
interface Vlan60
no ip address
!
!
!
!
line con 0
!
line vty 0 4
login
line vty 5 15
login
!
!
!
!
end
```

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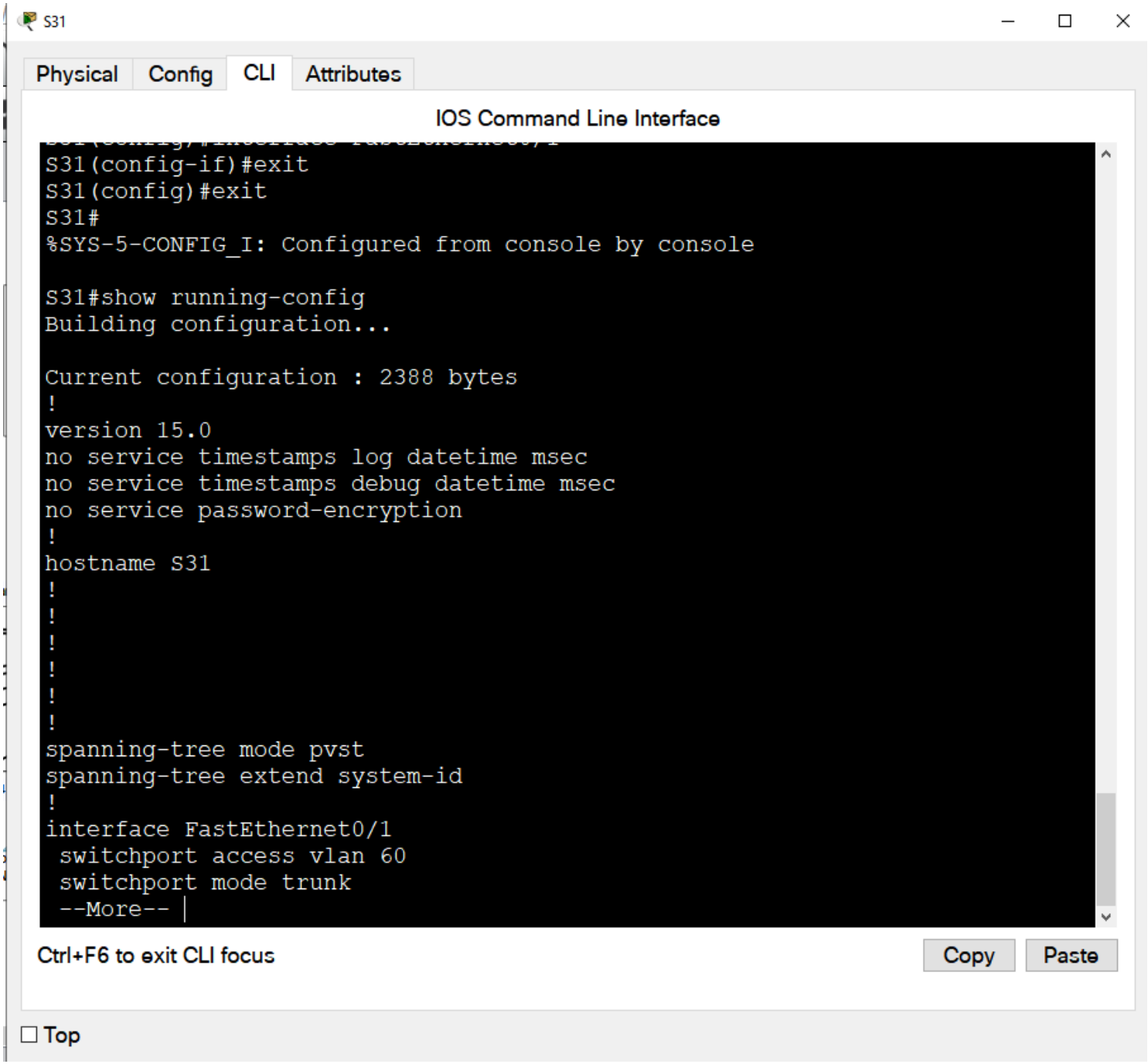

S31
Physical
Config
CLI
Attributes
IOS Command Line Interface
S31(config-if)#exit
S31(config)#exit
S31#
%SYS-5-CONFIG_I: Configured from console by console
S31#show running-config
Building configuration...
Current configuration : 2388 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S31
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport access vlan 60
switchport mode trunk
--More--
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

S31#show vlan

VLAN Name Status Ports
---- ------------------------------ --------- ------------------------------
1 default active
60 vlan60 active 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, Gig0/1
Gig0/2
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1 enet 100001 1500 - - - - - 0 0
60 enet 100060 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

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs

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

show ip interface brief

```
S31>show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/1        unassigned      YES manual up                    up
FastEthernet0/2        unassigned      YES manual up                    up
FastEthernet0/3        unassigned      YES manual up                    up
FastEthernet0/4        unassigned      YES manual up                    up
FastEthernet0/5        unassigned      YES manual up                    up
FastEthernet0/6        unassigned      YES manual up                    up
FastEthernet0/7        unassigned      YES manual up                    up
FastEthernet0/8        unassigned      YES manual up                    up
FastEthernet0/9        unassigned      YES manual up                    up
FastEthernet0/10       unassigned      YES manual up                    up
FastEthernet0/11       unassigned      YES manual up                    up
FastEthernet0/12       unassigned      YES manual up                    up
FastEthernet0/13       unassigned      YES manual up                    up
FastEthernet0/14       unassigned      YES manual up                    up
FastEthernet0/15       unassigned      YES manual up                    up
FastEthernet0/16       unassigned      YES manual up                    up
FastEthernet0/17       unassigned      YES manual up                    up
FastEthernet0/18       unassigned      YES manual up                    up
FastEthernet0/19       unassigned      YES manual up                    up
FastEthernet0/20       unassigned      YES manual up                    up
FastEthernet0/21       unassigned      YES manual up                    up
FastEthernet0/22       unassigned      YES manual up                    up
FastEthernet0/23       unassigned      YES manual up                    up
FastEthernet0/24       unassigned      YES manual up                    up
GigabitEthernet0/1     unassigned      YES manual up                    up
GigabitEthernet0/2     unassigned      YES manual up                    up
Vlan1                  unassigned      YES manual administratively down down
Vlan60                 unassigned      YES manual up                    up
```

Switch 21

S31#show running-config

```
S21#show running-config
Building configuration...

Current configuration : 2361 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S21
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
 switchport access vlan 50
 switchport mode trunk
!
interface FastEthernet0/2
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/3
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/4
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/5
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/6
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/7
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/8
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/9
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/10
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/11
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/12
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/13
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/14
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/15
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/16
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/17
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/18
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/19
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/20
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/21
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/22
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/23
 switchport access vlan 50
 switchport mode access
!
interface FastEthernet0/24
 switchport access vlan 50
 switchport mode access
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
 switchport access vlan 50
!
interface Vlan1
 no ip address
 shutdown
!
interface Vlan50
 no ip address
!
!
!
!
line con 0
!
line vty 0 4
 login
line vty 5 15
 login
!
!
!
!
end
```

Show ip interface brief

```
S21#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol
FastEthernet0/1        unassigned      YES manual up
up
FastEthernet0/2        unassigned      YES manual up
up
FastEthernet0/3        unassigned      YES manual up
up
FastEthernet0/4        unassigned      YES manual up
up
FastEthernet0/5        unassigned      YES manual up
up
FastEthernet0/6        unassigned      YES manual up
up
FastEthernet0/7        unassigned      YES manual up
up
FastEthernet0/8        unassigned      YES manual up
up
FastEthernet0/9        unassigned      YES manual up
up
FastEthernet0/10       unassigned      YES manual up
up
FastEthernet0/11       unassigned      YES manual up
up
FastEthernet0/12       unassigned      YES manual up
up
FastEthernet0/13       unassigned      YES manual up
up
FastEthernet0/14       unassigned      YES manual up
up
FastEthernet0/15       unassigned      YES manual up
up
FastEthernet0/16       unassigned      YES manual up
up
FastEthernet0/17       unassigned      YES manual up
up
FastEthernet0/18       unassigned      YES manual up
up
FastEthernet0/19       unassigned      YES manual up
up
FastEthernet0/20       unassigned      YES manual up
up
FastEthernet0/21       unassigned      YES manual up
up
FastEthernet0/22       unassigned      YES manual up
up
FastEthernet0/23       unassigned      YES manual up
```

```
up
GigabitEthernet0/1     unassigned      YES manual up
up
GigabitEthernet0/2     unassigned      YES manual up
up
Vlan1                  unassigned      YES manual
administratively down down
Vlan50                 unassigned      YES manual up
up
S21#
```

Show vlan

```
S21#show vlan

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Gig0/1
50   vlan50                            active    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, Gig0/2
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp
BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ----
-------- ------ ------
1    enet  100001     1500  -      -      -        -    -
0      0
50   enet  100050     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

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp
BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ----
-------- ------ ------

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

```
VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp
BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ----
-------- ------ ------

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

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

Switch 12

S12>show running-config

^
% Invalid input detected at '^' marker.
S12>ena
S12#show running-config
Building configuration...

Current configuration : 1865 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S12
!
!
!

```
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/2
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/3
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/4
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/5
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/6
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/7
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/8
```

```
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/9
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/10
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/11
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/12
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/13
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/14
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/15
switchport access vlan 30
switchport mode access
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
```

```
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
switchport mode trunk
!
interface GigabitEthernet0/2
!
interface Vlan1
no ip address
shutdown
!
!
!
!
line con 0
!
line vty 0 4
login
line vty 5 15
login
!
!
!
```

!

S12#show vlan

VLAN Name Status Ports
---- ------------------------------ --------- ------------------------------
1 default active Fa0/16, Fa0/17, Fa0/18, Fa0/19
Fa0/20, Fa0/21, Fa0/22, Fa0/23
Fa0/24
10 Admin active
20 Marketing active
30 Teacher 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
40 Manager active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1 enet 100001 1500 - - - - - 0 0
10 enet 100010 1500 - - - - - 0 0
20 enet 100020 1500 - - - - - 0 0
30 enet 100030 1500 - - - - - 0 0
40 enet 100040 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

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs

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

end

S12#show ip interface brief

Interface IP-Address OK? Method Status Protocol
FastEthernet0/1 unassigned YES manual up up
FastEthernet0/2 unassigned YES manual up up
FastEthernet0/3 unassigned YES manual up up
FastEthernet0/4 unassigned YES manual up up
FastEthernet0/5 unassigned YES manual up up
FastEthernet0/6 unassigned YES manual up up
FastEthernet0/7 unassigned YES manual up up
FastEthernet0/8 unassigned YES manual up up
FastEthernet0/9 unassigned YES manual up up
FastEthernet0/10 unassigned YES manual up up
FastEthernet0/11 unassigned YES manual up up
FastEthernet0/12 unassigned YES manual up up
FastEthernet0/13 unassigned YES manual up up
FastEthernet0/14 unassigned YES manual up up
FastEthernet0/15 unassigned YES manual up up
FastEthernet0/16 unassigned YES manual down down
FastEthernet0/17 unassigned YES manual down down
FastEthernet0/18 unassigned YES manual down down
FastEthernet0/19 unassigned YES manual down down
FastEthernet0/20 unassigned YES manual down down
FastEthernet0/21 unassigned YES manual down down
FastEthernet0/22 unassigned YES manual down down
FastEthernet0/23 unassigned YES manual down down
FastEthernet0/24 unassigned YES manual up up
GigabitEthernet0/1 unassigned YES manual up up

GigabitEthernet0/2 unassigned YES manual up up
Vlan1 unassigned YES manual administratively down down

router,

Switch 13

S13>ena

S13#show running-config

Building configuration...

Current configuration : 1406 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S13
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
switchport access vlan 10

```
switchport mode access
!
interface FastEthernet0/3
switchport access vlan 10
switchport mode access
!
interface FastEthernet0/4
switchport access vlan 10
switchport mode access
!
interface FastEthernet0/5
switchport access vlan 10
switchport mode access
!
interface FastEthernet0/6
switchport access vlan 10
switchport mode access
!
interface FastEthernet0/7
switchport access vlan 10
switchport mode access
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
```

```
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
switchport mode trunk
!
interface GigabitEthernet0/2
!
interface Vlan1
no ip address
shutdown
!
!
!
!
line con 0
!
```

```
line vty 0 4
login
line vty 5 15
login
!
!
!
!
end
```

S13#show vlan

```
VLAN Name Status Ports
---- -------------------------------- --------- -------------------------------
1 default active Fa0/1, 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, Gig0/2
10 Admin active Fa0/2, Fa0/3, Fa0/4, Fa0/5
Fa0/6, Fa0/7
20 Marketing active
30 Teacher active
40 Manager active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1 enet 100001 1500 - - - - - 0 0
10 enet 100010 1500 - - - - - 0 0
20 enet 100020 1500 - - - - - 0 0
30 enet 100030 1500 - - - - - 0 0
```

40 enet 100040 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

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs

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

S13#show ip interface brief

Interface IP-Address OK? Method Status Protocol
FastEthernet0/1 unassigned YES manual down down
FastEthernet0/2 unassigned YES manual up up
FastEthernet0/3 unassigned YES manual up up
FastEthernet0/4 unassigned YES manual up up
FastEthernet0/5 unassigned YES manual up up
FastEthernet0/6 unassigned YES manual up up
FastEthernet0/7 unassigned YES manual up up
FastEthernet0/8 unassigned YES manual down down
FastEthernet0/9 unassigned YES manual down down
FastEthernet0/10 unassigned YES manual down down
FastEthernet0/11 unassigned YES manual down down
FastEthernet0/12 unassigned YES manual down down
FastEthernet0/13 unassigned YES manual down down
FastEthernet0/14 unassigned YES manual down down
FastEthernet0/15 unassigned YES manual down down
FastEthernet0/16 unassigned YES manual down down
FastEthernet0/17 unassigned YES manual down down
FastEthernet0/18 unassigned YES manual down down

FastEthernet0/19 unassigned YES manual down down
FastEthernet0/20 unassigned YES manual down down
FastEthernet0/21 unassigned YES manual down down
FastEthernet0/22 unassigned YES manual down down
FastEthernet0/23 unassigned YES manual down down
FastEthernet0/24 unassigned YES manual down down
GigabitEthernet0/1 unassigned YES manual up up
GigabitEthernet0/2 unassigned YES manual down down
Vlan1 unassigned YES manual administratively down down

router 0

show running-config

Router0

Physical | Config | CLI | Attributes

IOS Command Line Interfa

```
Primary Secondary Type               Ports
------- --------- -----------------
----------------------------------------
Router>ena
Router#show  running-config
Building configuration...

Current configuration : 2248 bytes
!
version 15.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
ip dhcp pool LANMarketing
 network 192.168.20.0 255.255.255.0
 default-router 192.168.20.1
 dns-server 192.168.10.102
ip dhcp pool LANManager
 network 192.168.40.0 255.255.255.0
 default-router 192.168.40.1
 dns-server 192.168.10.102
ip dhcp pool LANTeacher
 network 192.168.30.0 255.255.255.0
 default-router 192.168.30.1
 dns-server 192.168.10.102
ip dhcp pool LANAdmin
 network 192.168.10.0 255.255.255.0
 default-router 192.168.10.1
 dns-server 192.168.10.102
ip dhcp pool LANLab1
 network 192.168.50.0 255.255.255.0
 default-router 192.168.50.1
 dns-server 192.168.10.102
ip dhcp pool LANLab2
 network 192.168.60.0 255.255.255.0
 default-router 192.168.60.1
 dns-server 192.168.10.102
!
!
!
no ip cef
no ipv6 cef
```

```
!
no ip cef
no ipv6 cef
!
!
!
!
license udi pid CISCO2911/K9 sn FTX1524VQL8-
!
!
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
!
!
```

```
interface GigabitEthernet0/0
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/0.10
 encapsulation dot1Q 10
 ip address 192.168.10.1 255.255.255.0
!
interface GigabitEthernet0/0.20
 encapsulation dot1Q 20
 ip address 192.168.20.1 255.255.255.0
!
interface GigabitEthernet0/0.30
 encapsulation dot1Q 30
 ip address 192.168.30.1 255.255.255.0
!
interface GigabitEthernet0/0.40
 encapsulation dot1Q 40
 ip address 192.168.40.1 255.255.255.0
!
interface GigabitEthernet0/1
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/1.50
 encapsulation dot1Q 50
 ip address 192.168.50.1 255.255.255.0
!
interface GigabitEthernet0/2
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/2.60
 encapsulation dot1Q 60
 ip address 192.168.60.1 255.255.255.0
!
interface FastEthernet0/3/0
 switchport mode access
 switchport nonegotiate
!
interface FastEthernet0/3/1
 switchport mode access
 switchport nonegotiate
!
```

```
interface FastEthernet0/3/1
 switchport mode access
 switchport nonegotiate
!
interface FastEthernet0/3/2
 switchport mode access
 switchport nonegotiate
!
interface FastEthernet0/3/3
 switchport mode access
 switchport nonegotiate
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
!
end
```

Show ip interface brief

```
Router>show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0     unassigned      YES unset  up                    up
GigabitEthernet0/0.10  192.168.10.1    YES manual up                    up
GigabitEthernet0/0.20  192.168.20.1    YES manual up                    up
GigabitEthernet0/0.30  192.168.30.1    YES manual up                    up
GigabitEthernet0/0.40  192.168.40.1    YES manual up                    up
GigabitEthernet0/1     unassigned      YES manual up                    up
GigabitEthernet0/1.50  192.168.50.1    YES manual up                    up
GigabitEthernet0/2     unassigned      YES manual up                    up
GigabitEthernet0/2.60  192.168.60.1    YES manual up                    up
FastEthernet0/3/0      unassigned      YES unset  up                    down
FastEthernet0/3/1      unassigned      YES unset  up                    down
FastEthernet0/3/2      unassigned      YES unset  up                    down
FastEthernet0/3/3      unassigned      YES unset  up                    down
Vlan1                  unassigned      YES unset  administratively down down
Router>
```

show vlan

```
Router>show Vlan

VLAN Name                                Status    Ports
---- ----------------------------------- --------- -------------------------------
1    default                             active    Fa0/3/0, Fa0/3/1, Fa0/3/2, Fa0/3/3
1002 fddi-default                        active
1003 token-ring-default                  active
1004 fddinet-default                     active
1005 trnet-default                       active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     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

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

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

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

```
S31>show vlan

VLAN Name                                Status    Ports
---- ----------------------------------- --------- -------------------------------
1    default                             active
60   vlan60                              active    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, Gig0/1
                                                   Gig0/2
1002 fddi-default                        active
1003 token-ring-default                  active
1004 fddinet-default                     active
1005 trnet-default                       active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
60   enet  100060     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

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

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

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

wireless access point

- **Show the implemented system.**
- Provide a step by step configuration of network devices in the network

P8 Document and analyze test results against expected results.

- Provide a step by step configuration of network devices in the network (Choose a device in the network and provide all the steps for configuration)
- **Test results** against test plans → analys

Ping and Tracer from Admin PC to Mail Server Successfully that what all I need

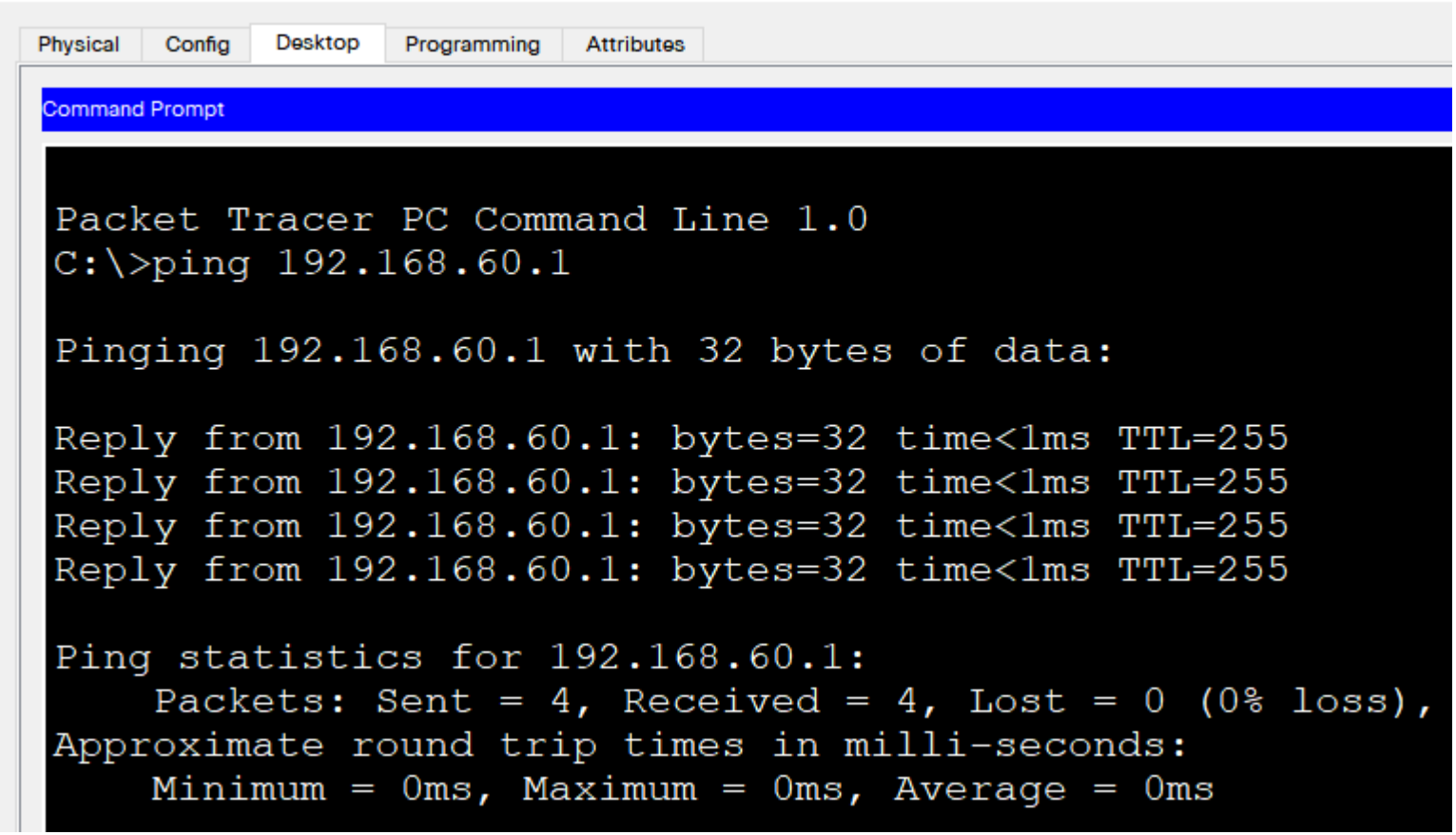
All my networking run very well without glitch or bug

--Connection test plan between devices,

Pc to Pc

To Vlan 60

ADMIN(1)



```
C:\>tracert 192.168.60.1

Tracing route to 192.168.60.1 over a maximum of 30 hops:

  1    0 ms       0 ms       0 ms      192.168.60.1

Trace complete.
```

To Vlan 50

```
C:\>ping 192.168.50.1

Pinging 192.168.50.1 with 32 bytes of data:

Reply from 192.168.50.1: bytes=32 time<1ms TTL=255
Reply from 192.168.50.1: bytes=32 time<1ms TTL=255
Reply from 192.168.50.1: bytes=32 time<1ms TTL=255
Reply from 192.168.50.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.50.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

To Vlan 40

```
C:\>ping 192.168.40.1

Pinging 192.168.40.1 with 32 bytes of data:

Reply from 192.168.40.1: bytes=32 time<1ms TTL=255
Reply from 192.168.40.1: bytes=32 time<1ms TTL=255
Reply from 192.168.40.1: bytes=32 time<1ms TTL=255
Reply from 192.168.40.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.40.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

To Vlan 30

```
C:\>ping 192.168.30.1

Pinging 192.168.30.1 with 32 bytes of data:

Reply from 192.168.30.1: bytes=32 time<1ms TTL=255
Reply from 192.168.30.1: bytes=32 time<1ms TTL=255
Reply from 192.168.30.1: bytes=32 time=1ms TTL=255
Reply from 192.168.30.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.30.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

To Vlan 20

```
C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=255
Reply from 192.168.20.1: bytes=32 time<1ms TTL=255
Reply from 192.168.20.1: bytes=32 time<1ms TTL=255
Reply from 192.168.20.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

To Vlan 10

--device with default gateway

```
C:\>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>tracert 192.168.10.1

Tracing route to 192.168.10.1 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      192.168.10.1
```

--terminal with web server- mail server-file server-DHCP server-DNS server

-web server

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BTEC

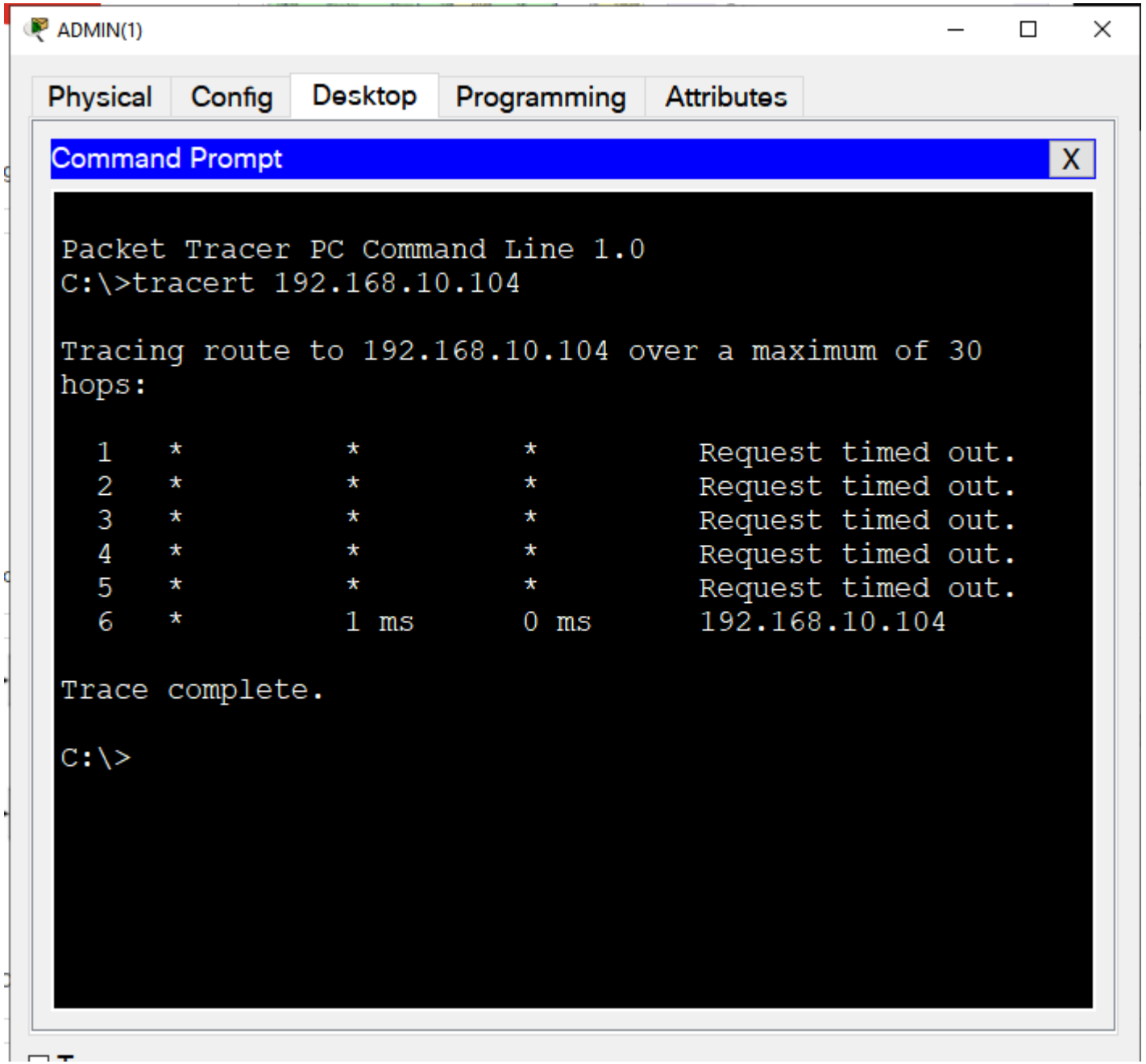
- mail server

```
C:\>ping 192.168.10.104

Pinging 192.168.10.104 with 32 bytes of data:

Reply from 192.168.10.104: bytes=32 time<1ms TTL=128
Reply from 192.168.10.104: bytes=32 time=1ms TTL=128
Reply from 192.168.10.104: bytes=32 time<1ms TTL=128
Reply from 192.168.10.104: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.104:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```


ADMIN(1)
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Packet Tracer PC Command Line 1.0
C:\>tracert 192.168.10.104
Tracing route to 192.168.10.104 over a maximum of 30 hops:
1 * * * Request timed out.
2 * * * Request timed out.
3 * * * Request timed out.
4 * * * Request timed out.
5 * * * Request timed out.
6 * 1 ms 0 ms 192.168.10.104
Trace complete.
C:\>

-DHCP server

```
C:\>ping 192.168.10.101

Pinging 192.168.10.101 with 32 bytes of data:

Reply from 192.168.10.101: bytes=32 time<1ms TTL=128
Reply from 192.168.10.101: bytes=32 time<1ms TTL=128
Reply from 192.168.10.101: bytes=32 time<1ms TTL=128
Reply from 192.168.10.101: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

-DNS server

```
C:\>ping 192.168.10.102

Pinging 192.168.10.102 with 32 bytes of data:

Reply from 192.168.10.102: bytes=32 time<1ms TTL=128
Reply from 192.168.10.102: bytes=32 time<1ms TTL=128
Reply from 192.168.10.102: bytes=32 time<1ms TTL=128
Reply from 192.168.10.102: bytes=32 time=24ms TTL=128

Ping statistics for 192.168.10.102:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 24ms, Average = 6ms
```

• Provide configuration of all devices (running-config at APPENDIX)

• Provide all Test results against test plans