



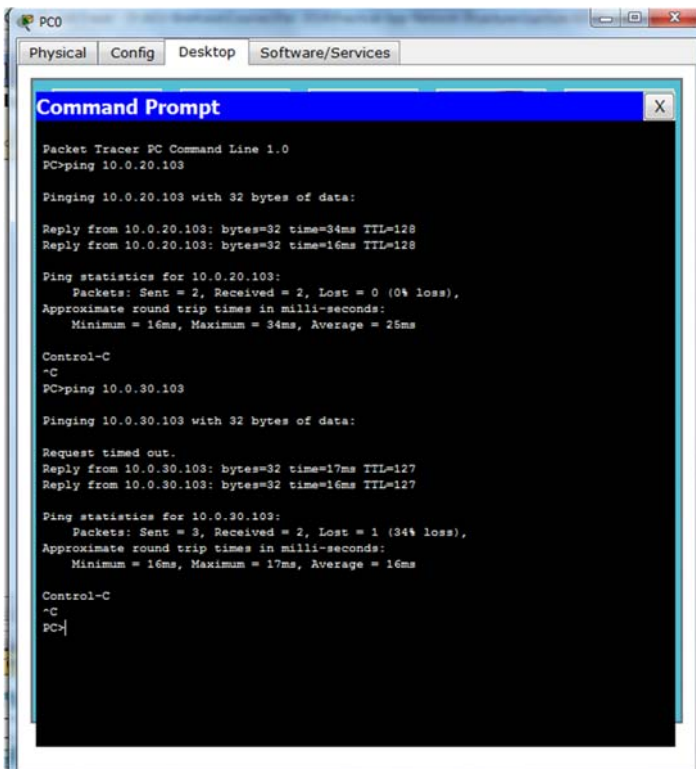
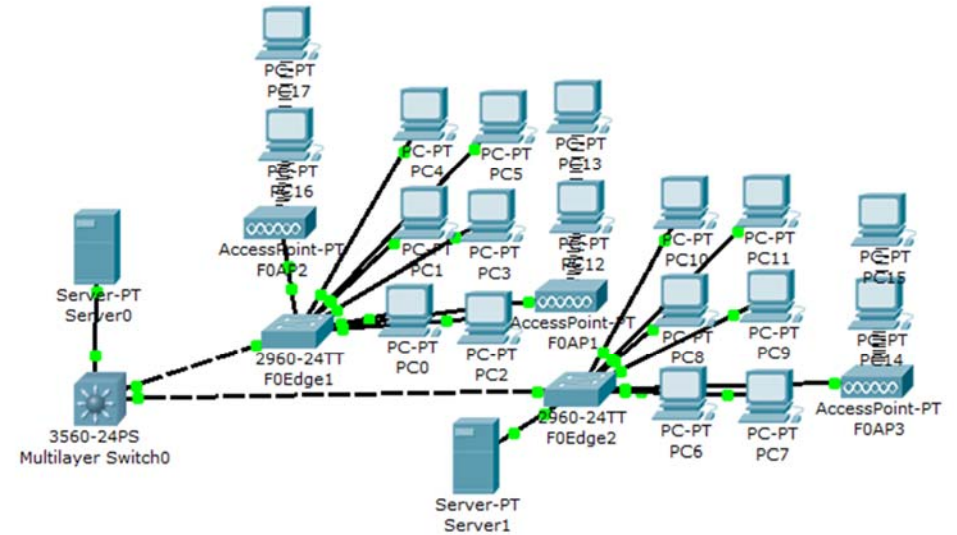
# Lecture (04) Multilayer Switch III

By:

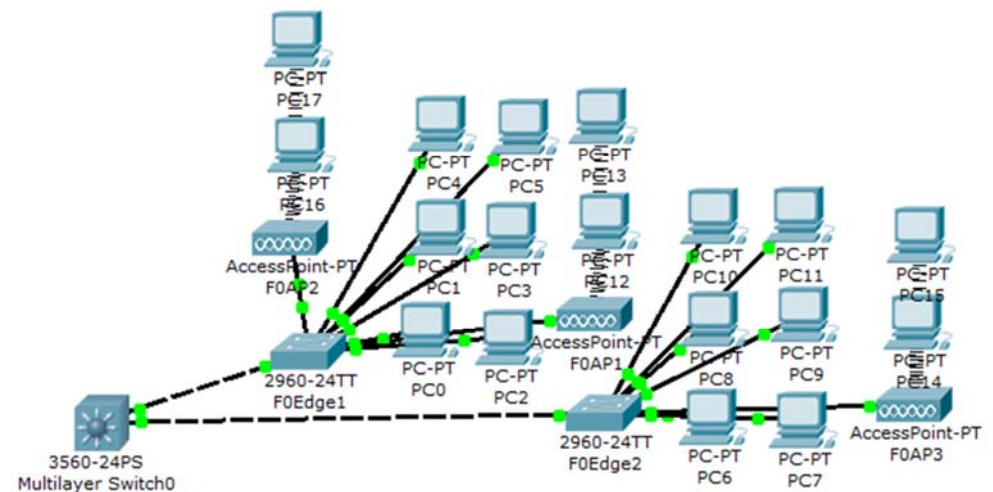
Dr. Ahmed ElShafee

Dr. Ahmed ElShafee, ACU : Semester Year, Practical App Network II

## Topology 01 - Multilayer + 2 DHCP Servers - Isolated WLAN



## Topology 1, with Multilayer Switch and DHCP service



Dr. Ahmed ElShafee, ACU : Semester Year, Practical App Network II

```

enable
config t
hostname Core
ip routing

line vty 0 4
password cisco
login

line console 0
password cisco
login

enable password cisco

enable secret cisco1

interface vlan 1
ip address 10.0.10.1 255.255.255.0
no shutdown

vlan 2
name vlan2

```

**Core**

```

interface vlan 2
ip address 10.0.20.1 255.255.255.0
no shutdown

vlan 3
name vlan3

interface vlan 3
ip address 10.0.30.1 255.255.255.0
no shutdown

vlan 4
name vlan4

interface vlan 4
ip address 10.0.40.1 255.255.255.0
no shutdown

vlan 5
name wlan

interface vlan 5
ip address 10.0.50.1 255.255.255.0
no shutdown

```

```

vtp domain ACU
vtp mode server

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/5-24
switchport trunk encapsulation dot1q
switchport mode trunk

interface fa0/1
switchport mode access
switchport access vlan 1

interface fa0/2
switchport mode access
switchport access vlan 2

interface fa0/3
switchport mode access
switchport access vlan 3

```

```

interface fa0/4
switchport mode access
switchport access vlan 4

interface fa0/5
switchport mode access
switchport access vlan 5

spanning-tree vlan 1,2,3,4,5 root primary

ip dhcp excluded-address 10.0.20.1
10.0.20.100
ip dhcp pool vlan2pool
network 10.0.20.0 255.255.255.0
default-router 10.0.20.1

ip dhcp excluded-address 10.0.30.1
10.0.30.100
ip dhcp pool vlan3pool
network 10.0.30.0 255.255.255.0
default-router 10.0.30.1

```

```

ip dhcp excluded-address 10.0.40.1
10.0.40.100
ip dhcp pool vlan4pool
network 10.0.40.0 255.255.255.0
default-router 10.0.40.1

```

```

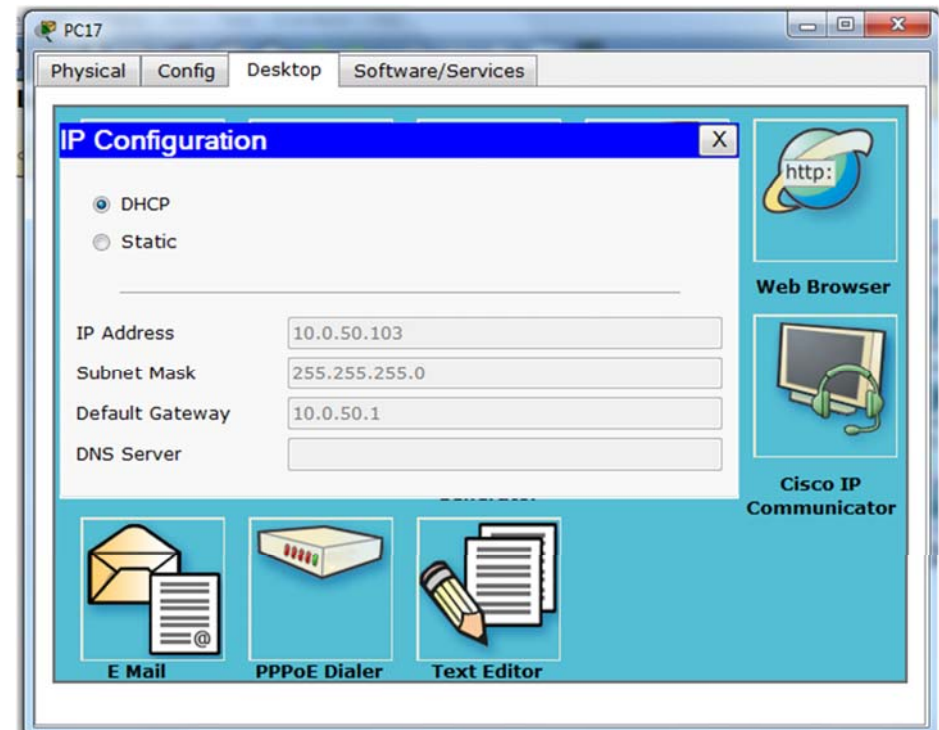
ip dhcp excluded-address 10.0.50.1
10.0.50.100
ip dhcp pool vlan5pool
network 10.0.50.0 255.255.255.0
default-router 10.0.50.1

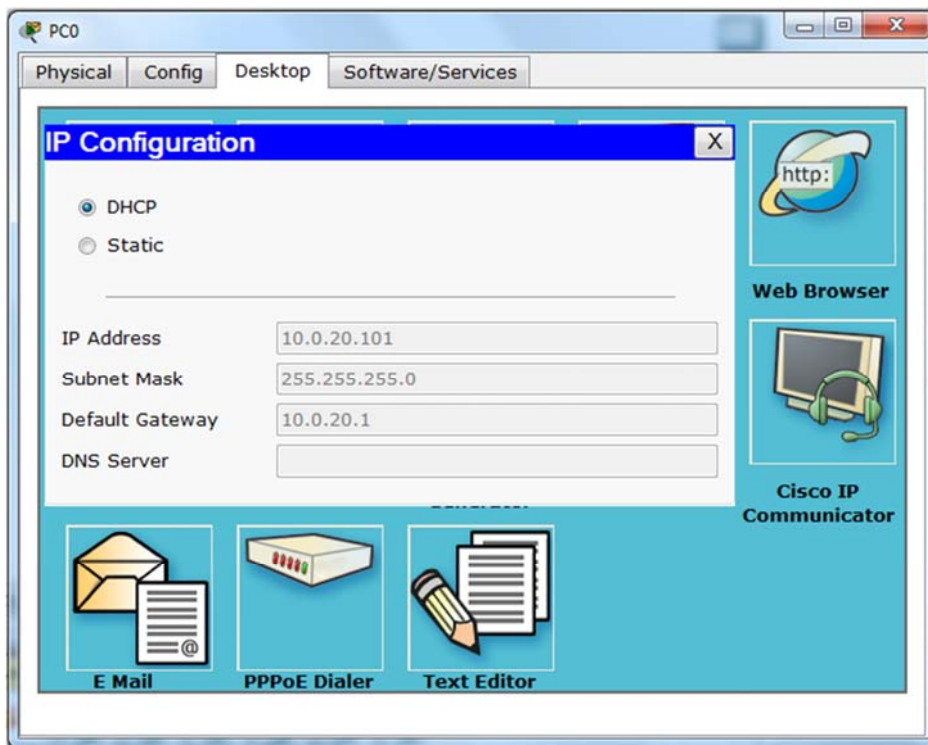
```

```

end
copy running-config startup-config

```





```
enable
config t
hostname Core
ip routing
```

### Core

```
line vty 0 4
password cisco
login
```

```
line console 0
password cisco
login
```

```
enable password cisco
```

```
enable secret cisco1
```

```
interface vlan 1
ip address 10.0.10.1 255.255.255.0
no shutdown
```

```
vlan 2
name vlan2
```

```
interface vlan 2
ip address 10.0.20.1 255.255.255.0
no shutdown
ip helper-address 10.0.10.254
```

```
vlan 3
name vlan3
```

```
interface vlan 3
ip address 10.0.30.1 255.255.255.0
no shutdown
ip helper-address 10.0.10.254
```

```
vlan 4
name vlan4
```

```
interface vlan 4
ip address 10.0.40.1 255.255.255.0
no shutdown
ip helper-address 10.0.10.254
```

```
vlan 5
name vlan5
```

```
vtp domain ACU
vtp mode server
```

```
interface range fa0/1-24
speed auto
duplex auto
```

```
interface range fa0/6-24
switchport trunk encapsulation dot1q
switchport mode trunk
```

```
interface fa0/1
switchport mode access
switchport access vlan 1
```

```
interface fa0/2
switchport mode access
switchport access vlan 2
```

```
interface fa0/3
switchport mode access
switchport access vlan 3
```

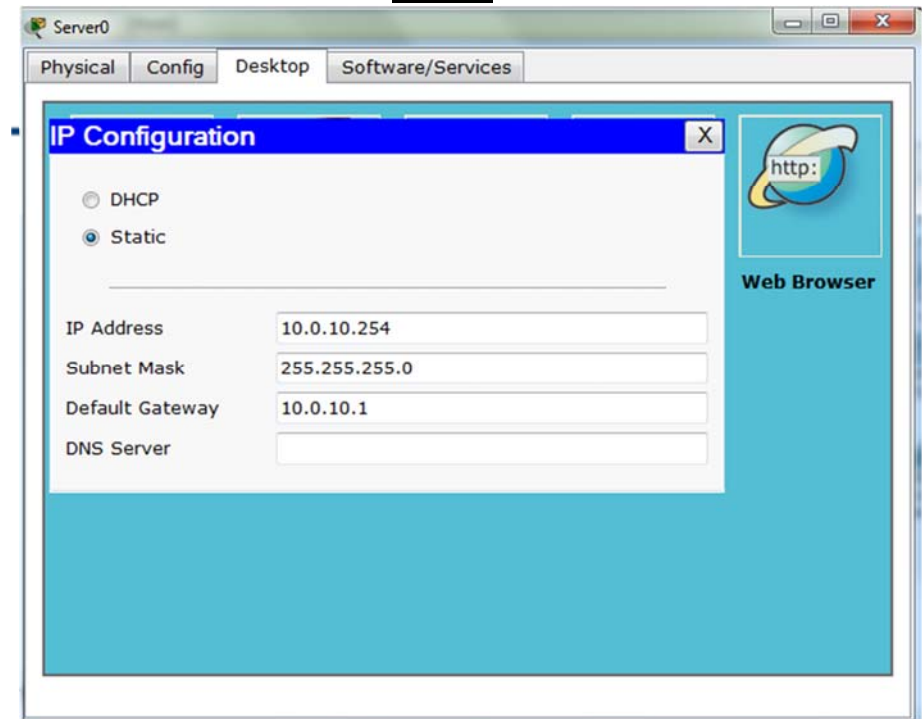
```
interface fa0/4
switchport mode access
switchport access vlan 4
```

```
interface fa0/5
switchport mode access
switchport access vlan 5
```

```
spanning-tree vlan 1,2,3,4,5 root primary
```

```
end
copy running-config startup-config
```

### Server 0





Server0

Physical Config Desktop Software/Services

GLOBAL

Settings

Algorithm Settings

SERVICES

HTTP

DHCP

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

INTERFACE

FastEthernet

DHCP

Service  On  Off

Pool Name: serverPool

Default Gateway: 10.0.20.1

DNS Server: 0.0.0.0

Start IP Address: 10 0 20 101

Subnet Mask: 255 255 255 0

Maximum number of Users: 154

TFTP Server: 0.0.0.0

Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max Number	TFTP Sever
serverPool	10.0.20.1	0.0.0.0	10.0.20.101	255.255.25...	154	0.0.0.0
serverPool3	10.0.30.1	0.0.0.0	10.0.30.101	255.255.25...	154	0.0.0.0
serverPool4	10.0.40.1	0.0.0.0	10.0.40.101	255.255.25...	154	0.0.0.0

Server1

Physical Config Desktop Software/Services

IP Configuration

DHCP

Static

IP Address: 10.0.50.254

Subnet Mask: 255.255.255.0

Default Gateway:

DNS Server:

Web Browser

Server1

Physical Config Desktop Software/Services

GLOBAL

Settings

Algorithm Settings

SERVICES

HTTP

DHCP

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

INTERFACE

FastEthernet

DHCP

Service  On  Off

Pool Name: serverPool

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address: 10 0 50 101

Subnet Mask: 255 255 255 0

Maximum number of Users: 154

TFTP Server: 0.0.0.0

Add Save Remove

Pool Name	Default Gatew	DNS Server	Start IP Addr	Subnet Ma:	Max Num	TFTP Sev
serverPool	0.0.0.0	0.0.0.0	10.0.50.101	255.255....	154	0.0.0.0

PC16

Physical Config Desktop Software/Services

Command Prompt

```

PC>ping 10.0.50.102

Pinging 10.0.50.102 with 32 bytes of data:

Reply from 10.0.50.102: bytes=32 time=76ms TTL=128
Reply from 10.0.50.102: bytes=32 time=44ms TTL=128
Reply from 10.0.50.102: bytes=32 time=34ms TTL=128
Reply from 10.0.50.102: bytes=32 time=35ms TTL=128

Ping statistics for 10.0.50.102:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 34ms, Maximum = 76ms, Average = 47ms

PC>ping 10.0.50.104

Pinging 10.0.50.104 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.


Ping statistics for 10.0.50.104:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>
Packet Tracer PC Command Line 1.0
PC>ping 10.0.50.104

Pinging 10.0.50.104 with 32 bytes of data:

Reply from 10.0.50.104: bytes=32 time=67ms TTL=128
Reply from 10.0.50.104: bytes=32 time=32ms TTL=128

Ping statistics for 10.0.50.104:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 32ms, Maximum = 67ms, Average = 49ms
  
```



**Thanks,..**  
**See you next week (ISA),...**