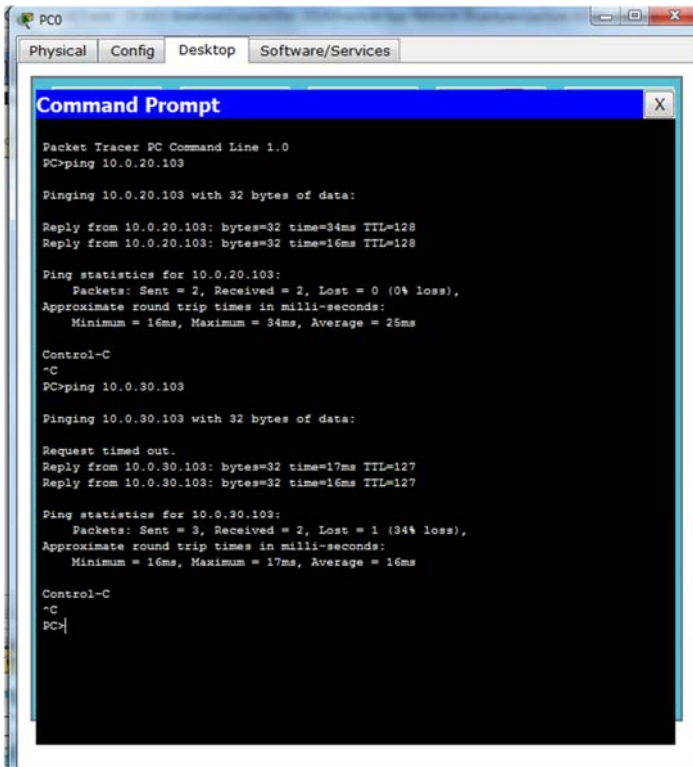
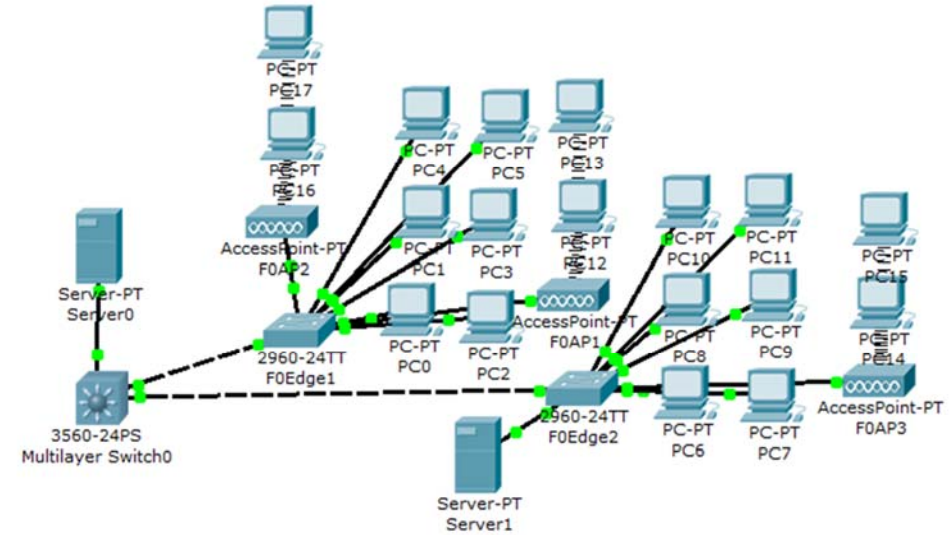


Lecture (09) Multi layer Switch II

By:
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Dr. Ahmed ElShafee, ACU : Fall 2015, Practical App.
Networks II

Multilayer + 2 DHCP Servers - Isolated WLAN



```

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 cisco

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
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
```

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Server 0

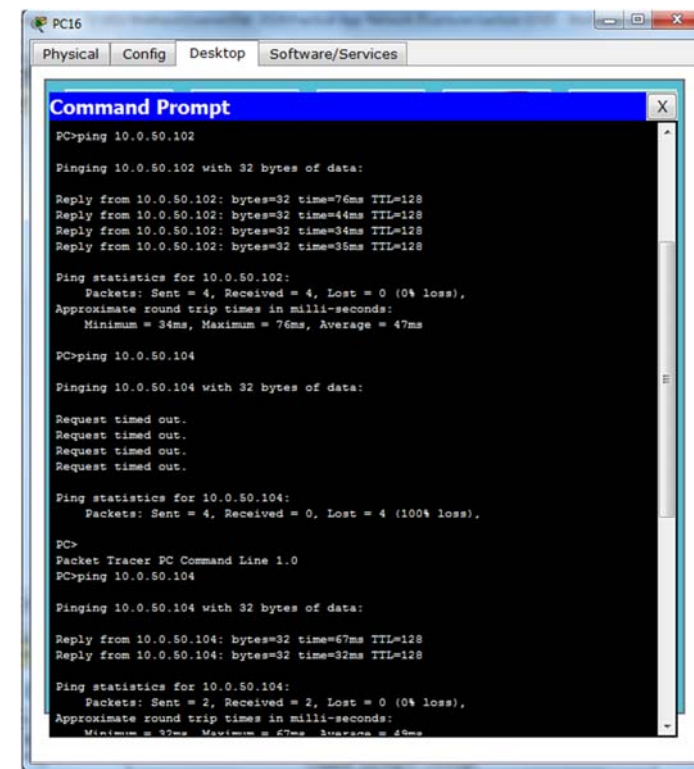
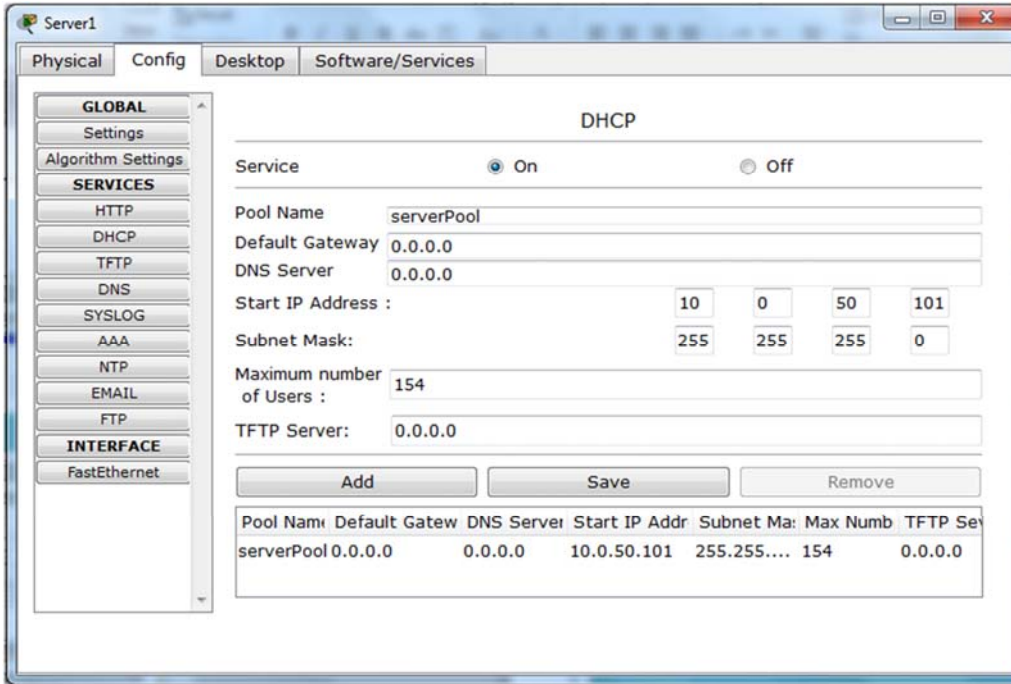
The screenshot shows the IP Configuration window for Server0. The 'Static' radio button is selected. The IP Address is 10.0.10.254, Subnet Mask is 255.255.255.0, and Default Gateway is 10.0.10.1. The DNS Server field is empty. A 'Web Browser' icon is visible on the right side of the window.

Server 1

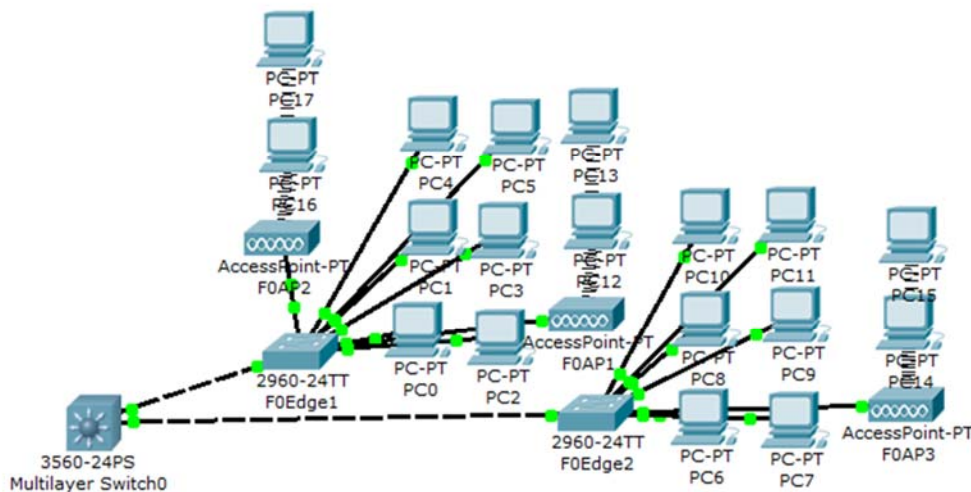
The screenshot shows the IP Configuration window for Server1. The 'Static' radio button is selected. The IP Address is 10.0.50.254, Subnet Mask is 255.255.255.0, and the Default Gateway and DNS Server fields are empty. A 'Web Browser' icon is visible on the right side of the window.

The screenshot shows the DHCP configuration window for Server0. The 'On' radio button is selected. The Pool Name is 'serverPool', Default Gateway is 10.0.20.1, and DNS Server is 0.0.0.0. The Start IP Address is 10.0.20.101 and Subnet Mask is 255.255.255.0. The Maximum number of Users is 154. The TFTP Server is 0.0.0.0. Below the configuration fields is a table of IP pools.

| 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 |



Multilayer Switch and DHCP service



```

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
  
```

```

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
```

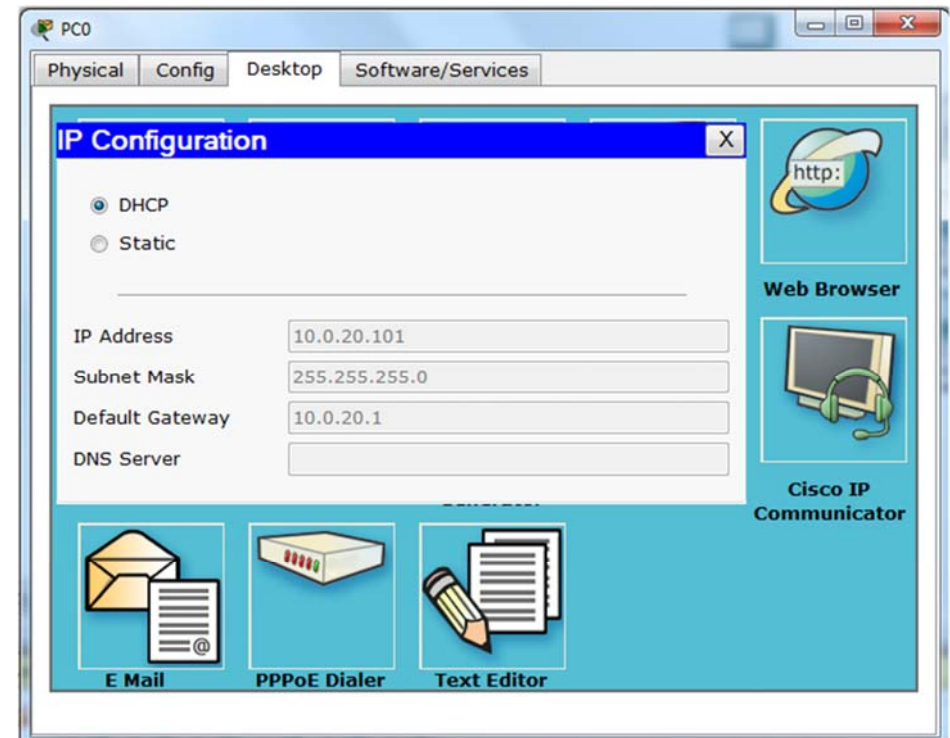
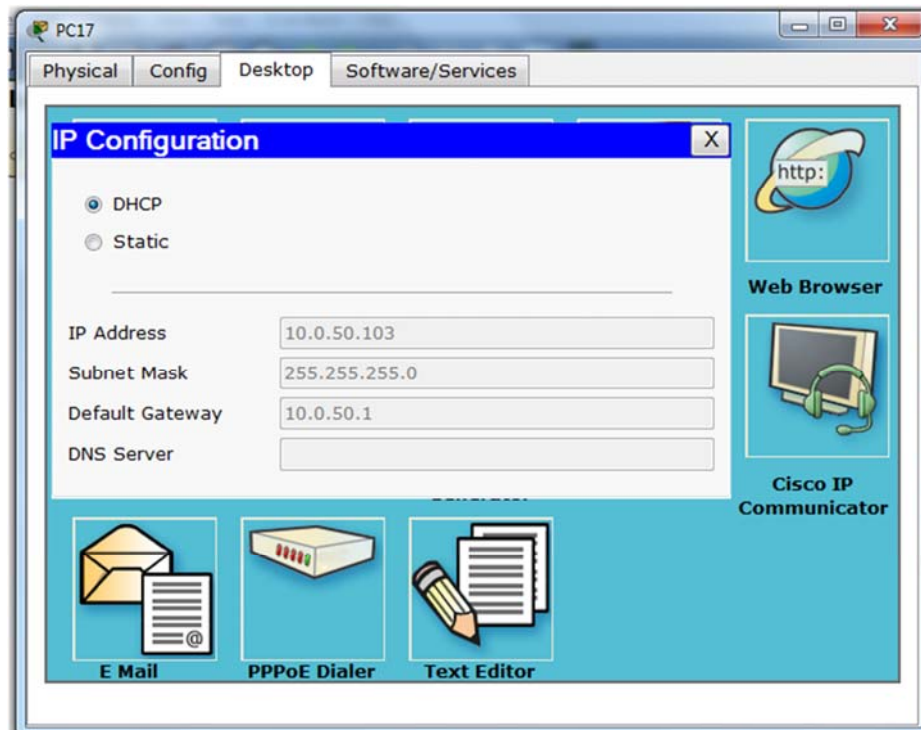
```
ip dhcp excluded-address 10.0.20.1
10.0.20.100
ip dhcp pool vlan2pool
network 10.0.20.0 255.255.255.0
default-router 10.0.20.1
```

```
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
```

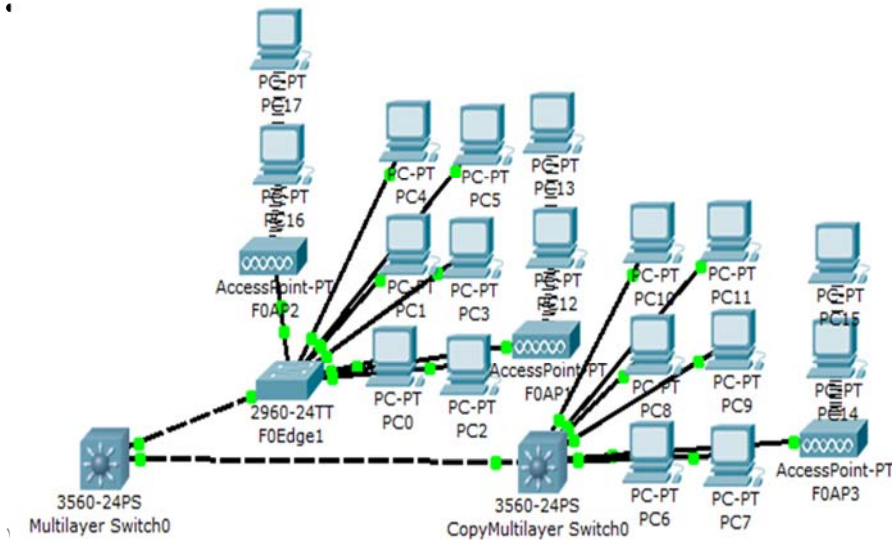
```
ip dhcp excluded-address 10.0.40.1
10.0.40.100
ip dhcp pool vlan4pool
network 10.0.40.0 255.255.255.0
default-router 10.0.40.1
```

```
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
```



Multi layer switch with DHCP service, isolated WLAN



```

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

```

```

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

vtp domain ACU
vtp mode server

```

```

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/1-24
switchport trunk encapsulation dot1q
switchport mode trunk

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

end
copy running-config startup-config

```

```

enabl
config t
hostname F0Edge2
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 10.0.10.3 255.255.255.0
no shutdown

vtp domain ACU
vtp mode client

```

```

vlan 5
name wlan

interface vlan 5
ip address 10.0.50.1 255.255.255.0
no shutdown

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/24
switchport mode trunk

interface range fa0/1-7
switchport mode access
switchport access vlan 2

interface range fa0/8-14
switchport mode access
switchport access vlan 3

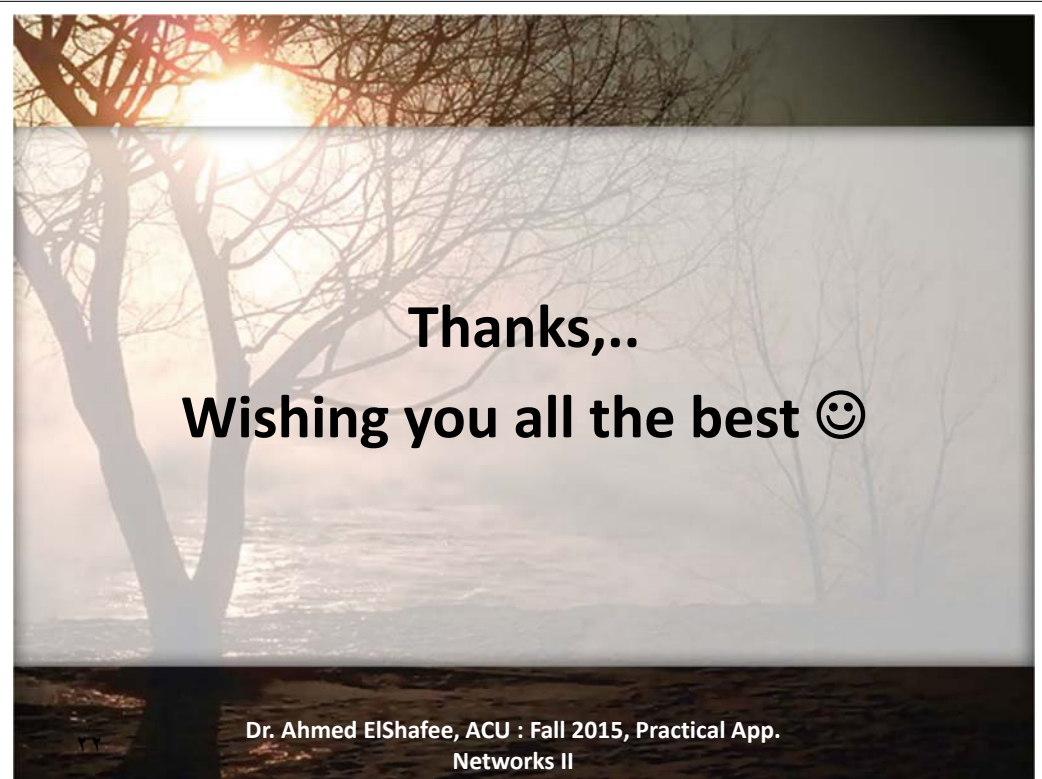
interface range fa0/15-21
switchport mode access
switchport access vlan 4

```

```
interface range fa0/22-23
switchport mode access
switchport access vlan 5
```

```
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
```



Thanks,..
Wishing you all the best 😊

Dr. Ahmed ElShafee, ACU : Fall 2015, Practical App.
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