



# Lecture (02)

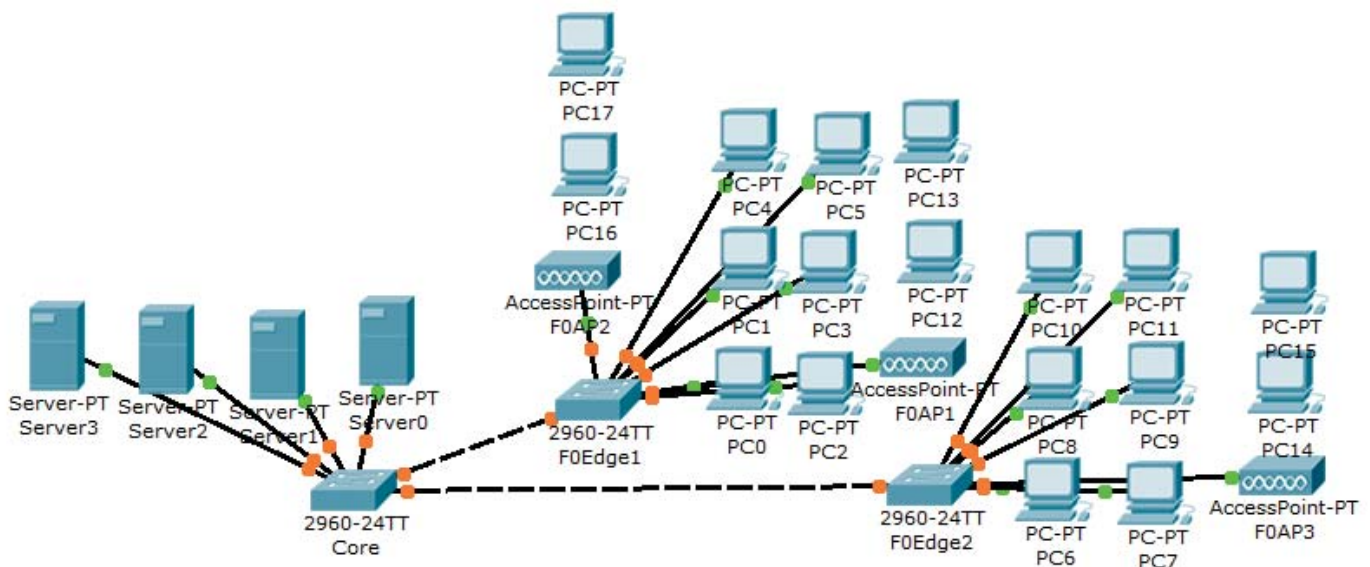
## Extended Service set with DHCP server Multilayer Switch I

By:

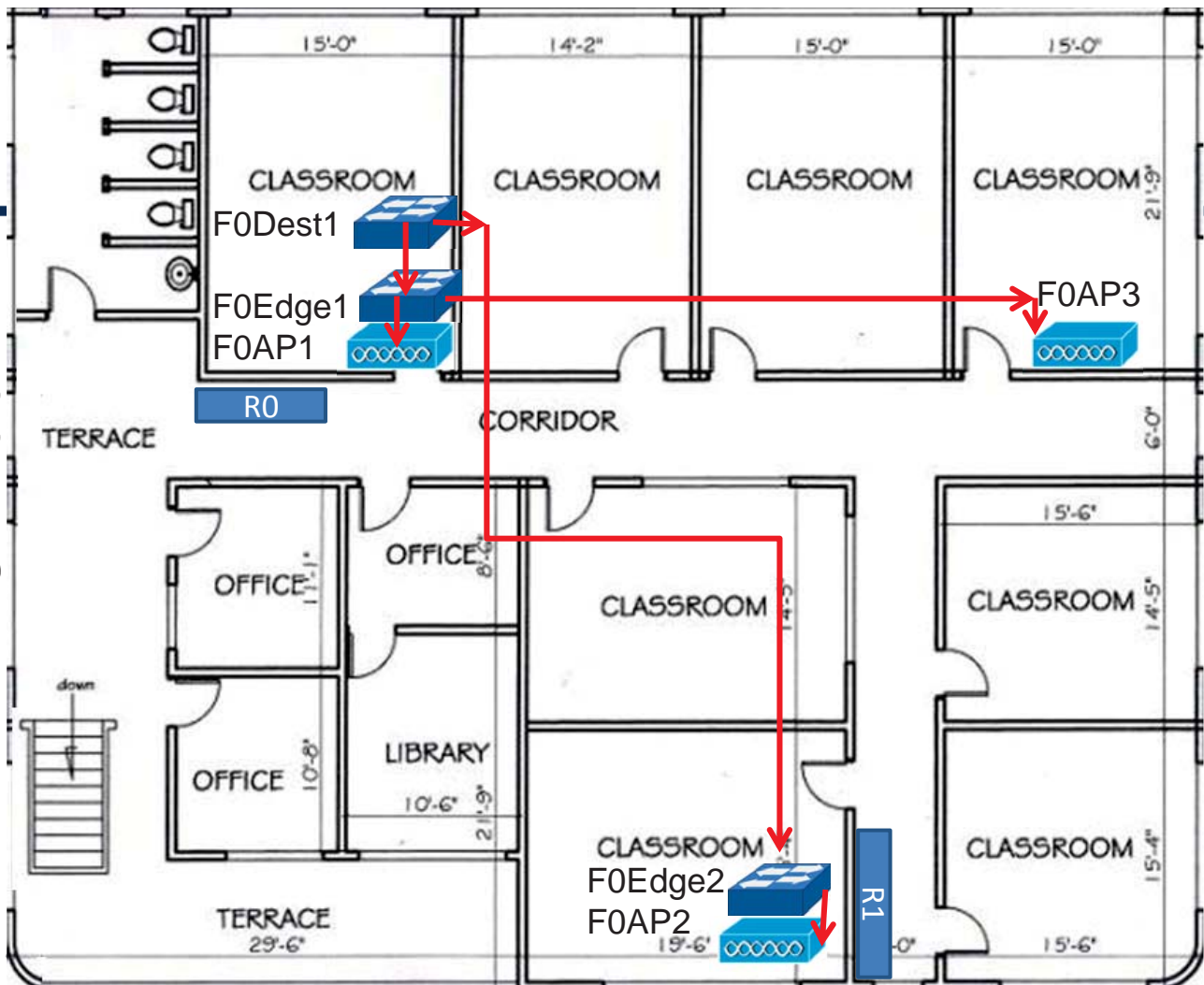
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### Topology 01 - 4 DHCP servers



# G Floor



## F0Dest

```
enable
config t
hostname 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
```

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

```
vlan 2
name vlan2
```

```
vlan 3
name vlan3
```

```
vlan 4
name vlan4
```

```
vlan 5
name wlan
```

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

```
interface range fa6/1-24
switchport mode trunk
```

```
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
```

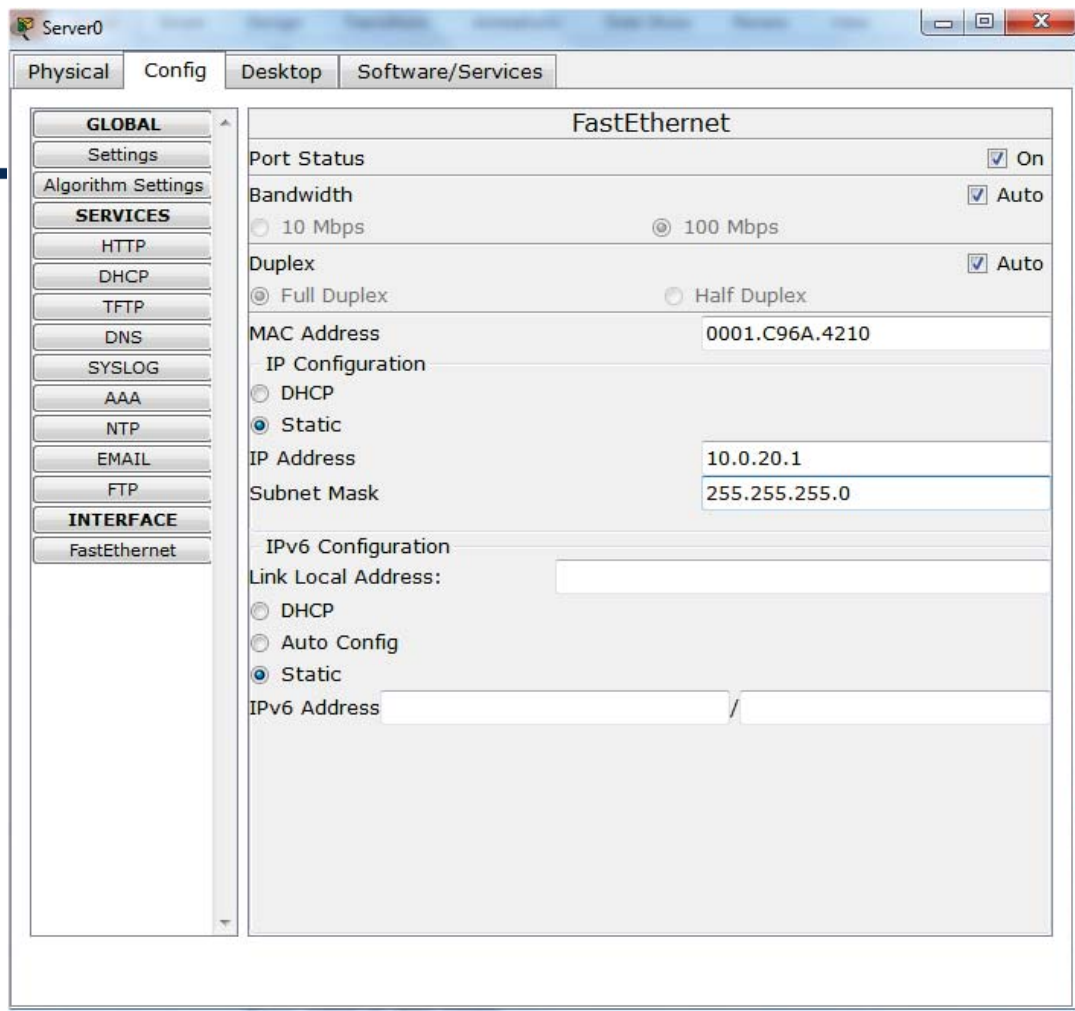
```
spanning-tree vlan 1,2,3,4,5 root primary
```

```
end
```

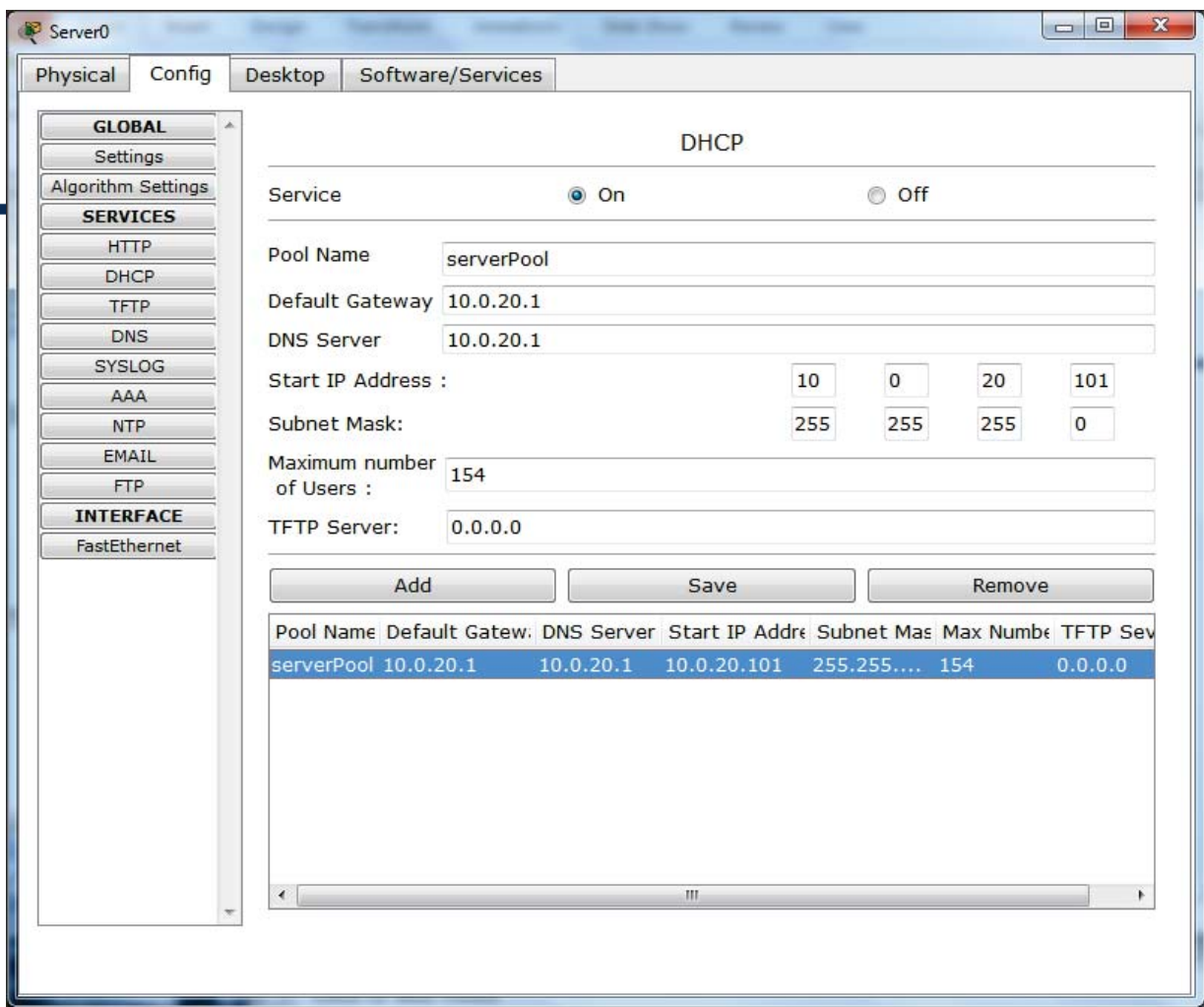
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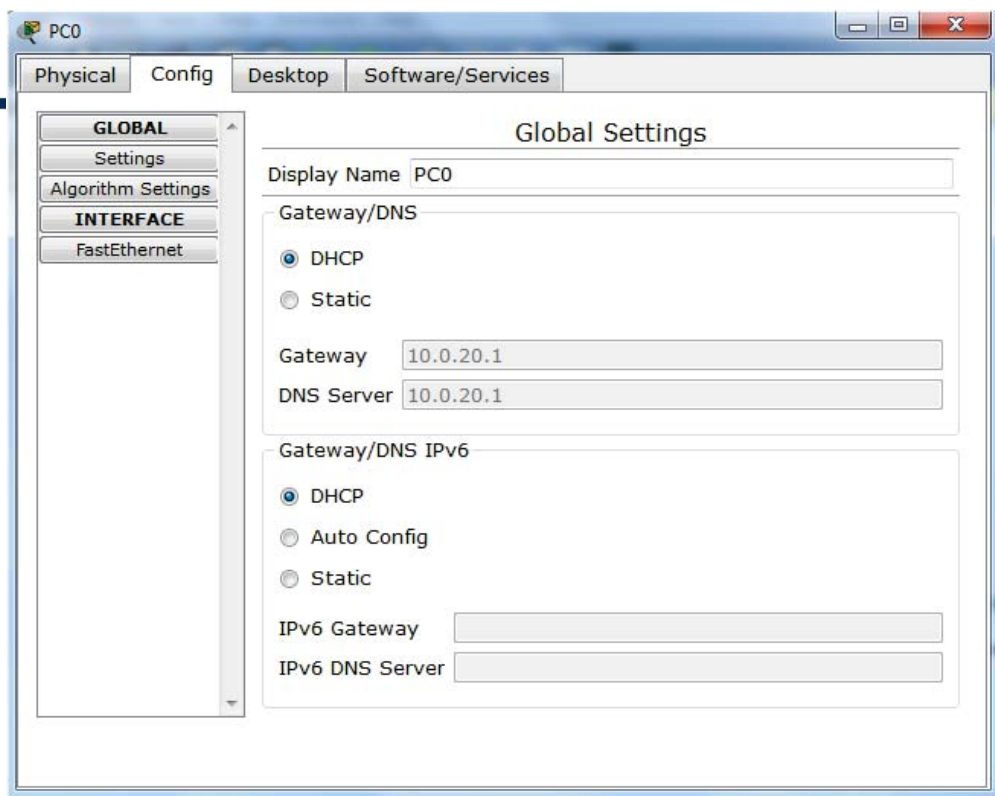
## DHCP Server@VLAN02

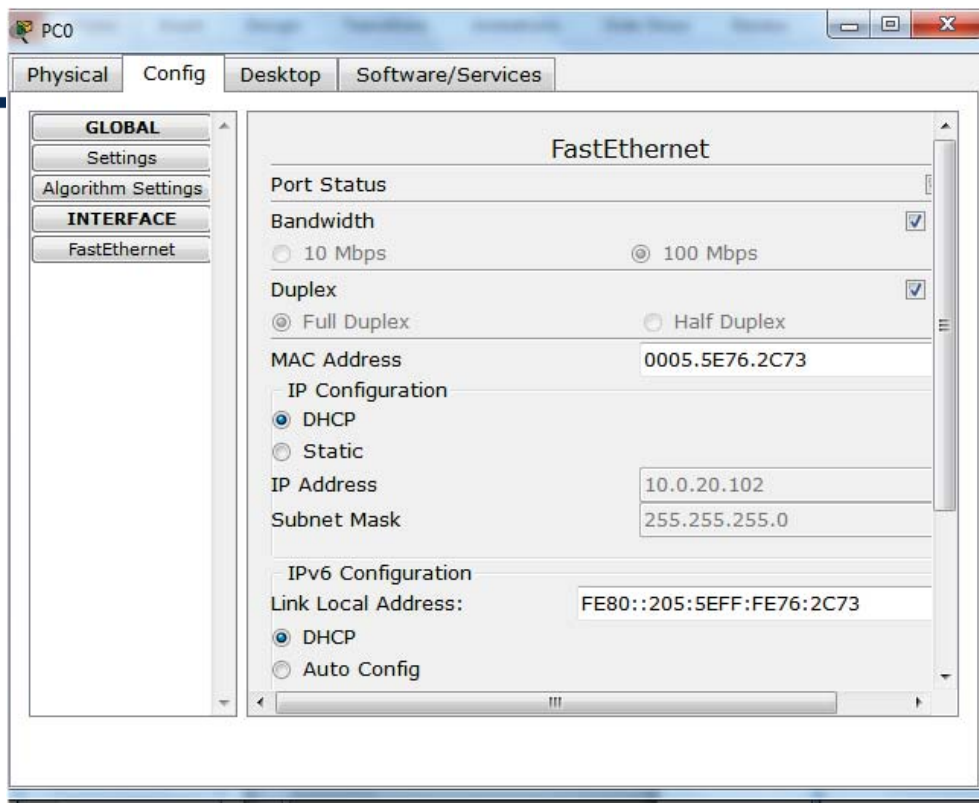


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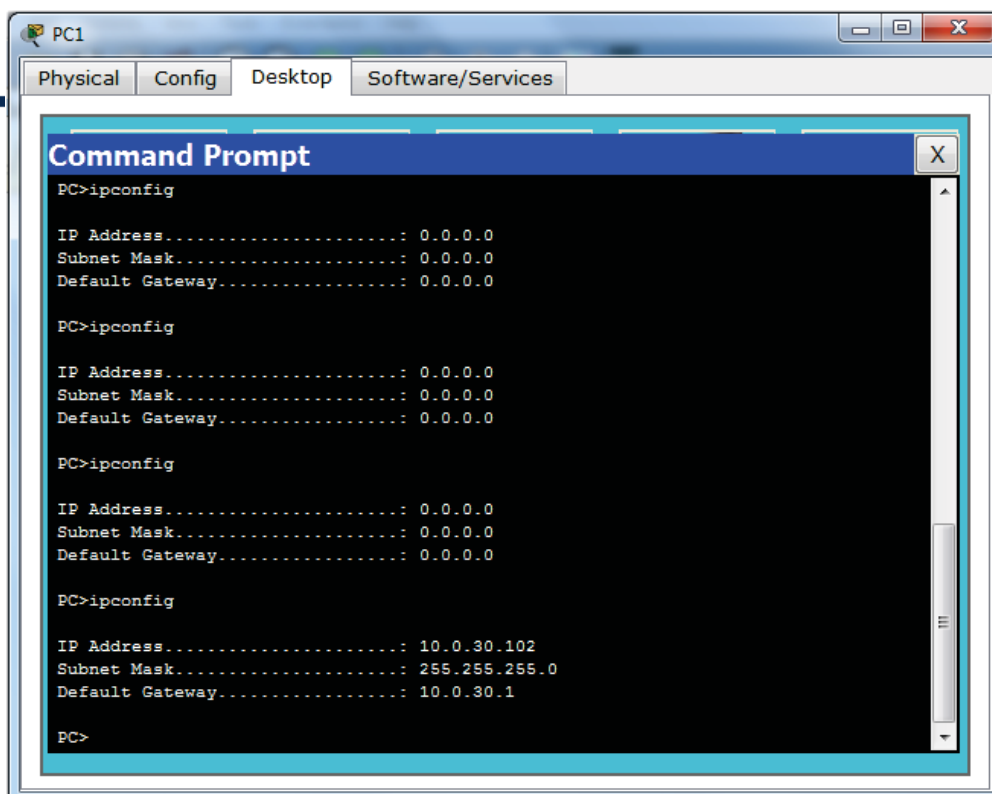
## PC@VLAN02





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## Testing

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- all switches can access all other switches
- F0Dest is the core
- All PCs on VLAN 02 can access each other
- All PCs on VLAN 03 can access each other
- All PCs on VLAN 04 can access each other
- All Wireless PCs can access each other

## Multilayer Switch 3560

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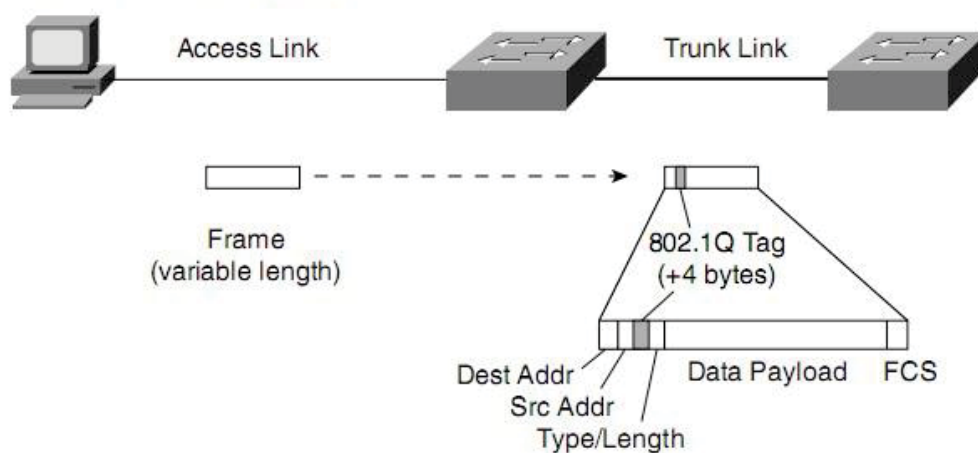
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## What is the difference between L2 & L3 switch

1. Can exchange IP packets between different VLANs if the switch can identify the destination
2. While passing packets through trunk port, switch strip L2 header/tale of packet including VLAN tag (802.1q protocol), determine destination port, add new L2 header/tale to IP packet contains VLAN tag for destination port.

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### *IEEE 802.1Q Frame-Tagging Standard*



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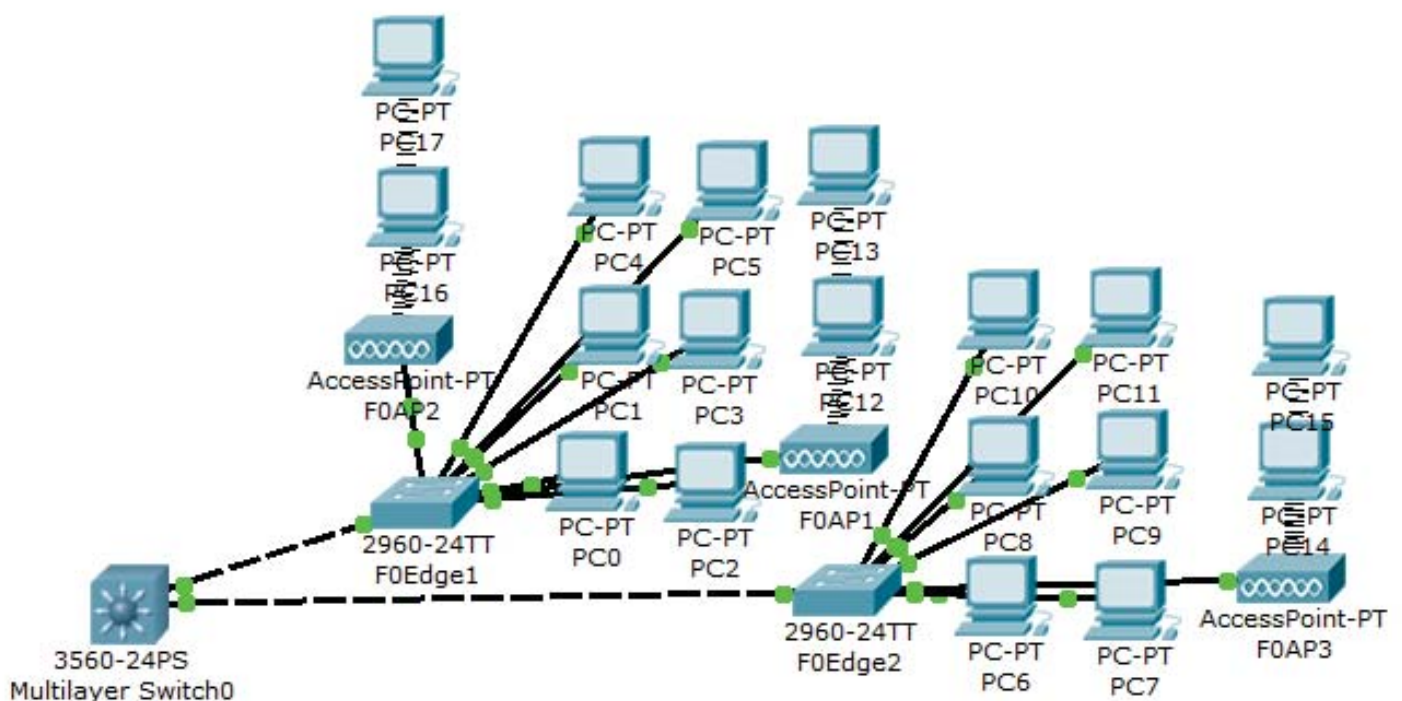
Commands can be only executed on multi-layer switch

- Enable L3 packet routing
  - ip routing
- Enable encapsulation on trunk ports
  - interface range fa0/1-24
  - switchport trunk encapsulation dot1q
  - switchport mode trunk

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## Topology 1, with Multilayer Switch

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