

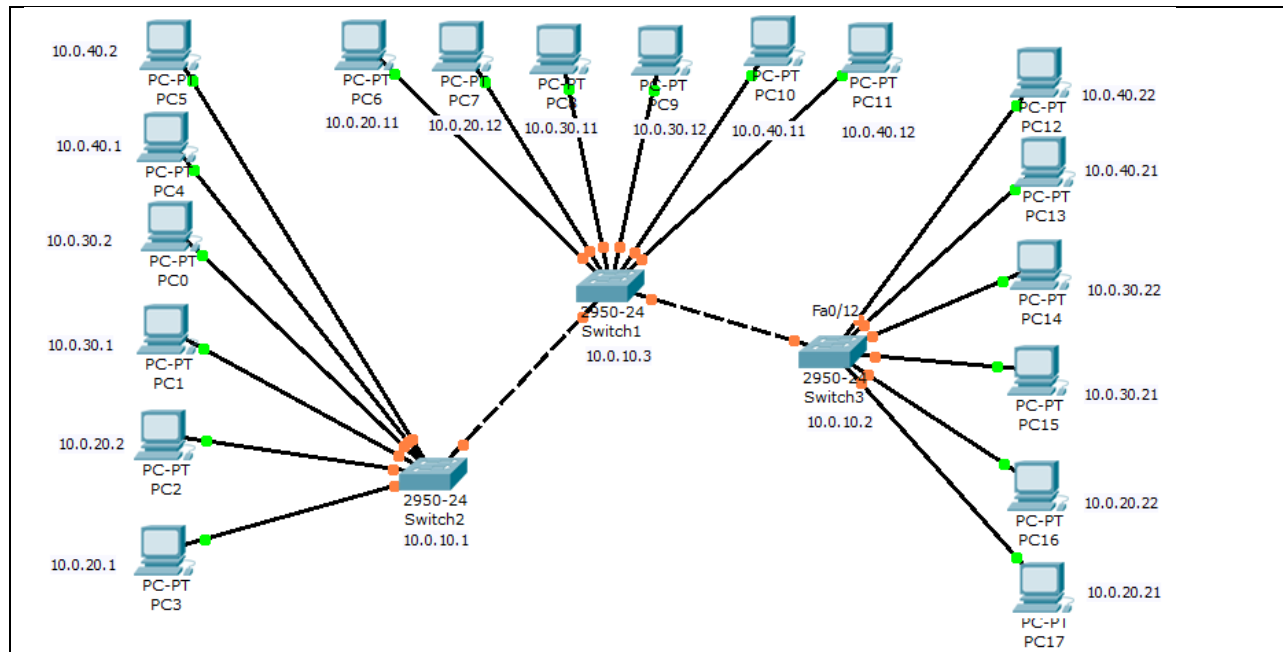
# Practical Applications in Networks I

## Lab 04

( based on Lec. 06, 07)

# Practical Applications in Networks II

## Lecture 05 - code



#### SW01 basic configuration

```
enabl
config t
hostname FL01-R01-SW01
banner motd #FL01-R01-SW01 - 10.0.10.1#

line vty 0 4
password cisco
login

line console 0
password cisco
login

enable password cisco

enable secret cisco1

vtp domain ACU
vtp mode server

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



```
vlan 2
name Finance

vlan 3
name HR

vlan 4
name Administration

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/1-5
switchport mode access
switchport access vlan 2

interface range fa0/6-10
switchport mode access
switchport access vlan 3

interface range fa0/11-15
switchport mode access
switchport access vlan 4

interface range fa0/23-24
switchport mode trunk

end

copy running-config startup-config
```

#### SW02 basic configuration

```
SW02
****
enabl
config t
hostname FL01-R02-SW02
banner motd #FL01-R02-SW02 - 10.0.10.2#

line vty 0 4
password cisco
login
```



```
line console 0
password cisco
login

enable password cisco

enable secret cisco1

vtp domain ACU
vtp mode client

interface vlan 1
ip address 10.0.10.2 255.255.255.0
no shutdown

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/1-5
switchport mode access
switchport access vlan 2

interface range fa0/6-10
switchport mode access
switchport access vlan 3

interface range fa0/11-15
switchport mode access
switchport access vlan 4

interface fa0/24
switchport mode trunk

interface fa0/23
switchport mode trunk

end
```

SW03 basic configuration

enabl



```
config t
hostname FL01-R03-SW03
banner motd #FL01-R03-SW03 - 10.0.10.3#

line vty 0 4
password cisco
login

line console 0
password cisco
login

enable password cisco

enable secret cisco1

vtp domain ACU
vtp mode client

interface vlan 1
ip address 10.0.10.3 255.255.255.0
no shutdown

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/1-5
switchport mode access
switchport access vlan 2

interface range fa0/6-10
switchport mode access
switchport access vlan 3

interface range fa0/11-15
switchport mode access
switchport access vlan 4

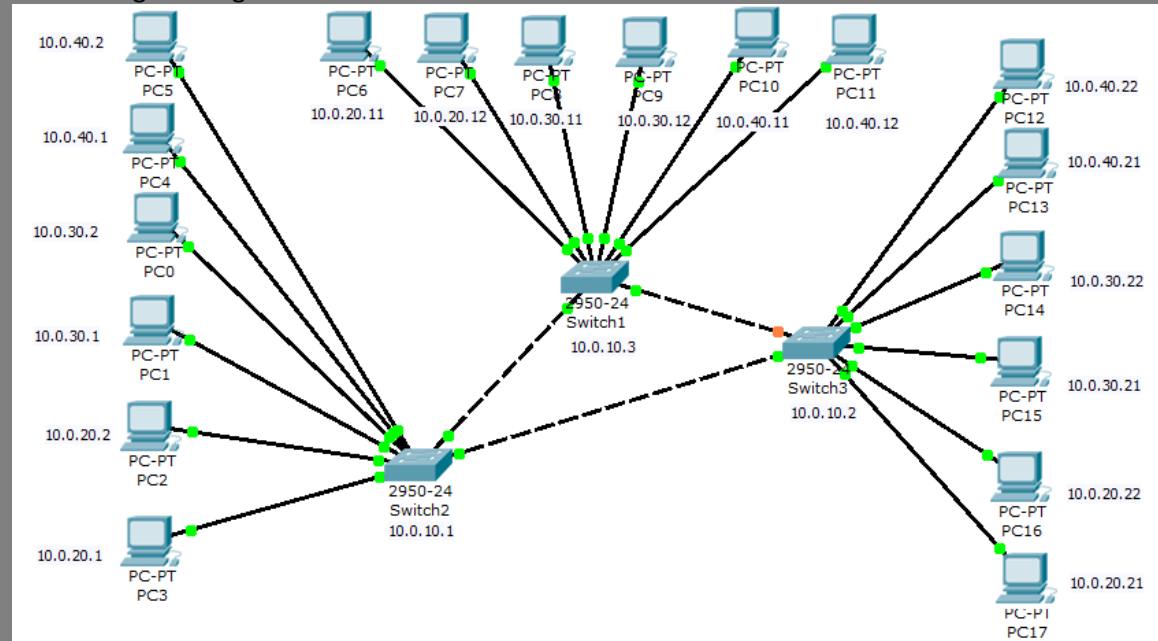
interface fa0/24
switchport mode trunk
```

```
interface fa0/23
switchport mode trunk
```

```
end
```

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

### Connecting the ring trunk



#### SW02

```
enable
config t
interface fa0/22
switchport mode trunk
end
copy running-config startup-config
```

#### SW03

```
enable
config t
interface fa0/22
switchport mode trunk
end
copy running-config startup-config
```

#### discovering root switch

```
show spanning-tree vlan 1
```

Enable spanning tree on root switch, method 1

SW01 (root switch) method 1

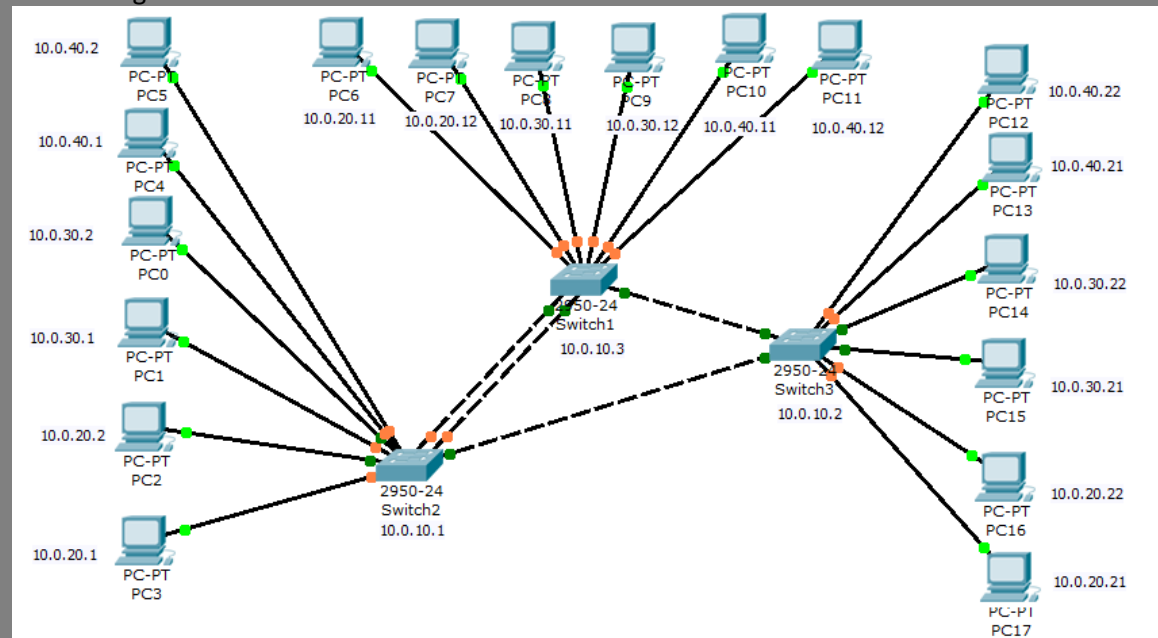
```
enable
show vlan
config t
spanning-tree vlan 1,2,3,4 priority 0
end
copy running-config startup-config
```

Enable spanning tree on root switch, method 2

SW01 (root switch) method 2

```
enable
show vlan
config t
spanning-tree vlan 1,2,3,4 root primary
end
copy running-config startup-config
```

Connecting redundant trunk



SW01

```
enable
config t
interface fa0/21
```



```
switchport mode trunk
end
copy running-config startup-config
```

SW02

```
enable
config t
interface fa0/21
switchport mode trunk
end
copy running-config startup-config
```

sw01,02 (discovering root links)

```
show spanning-tree vlan 1
```

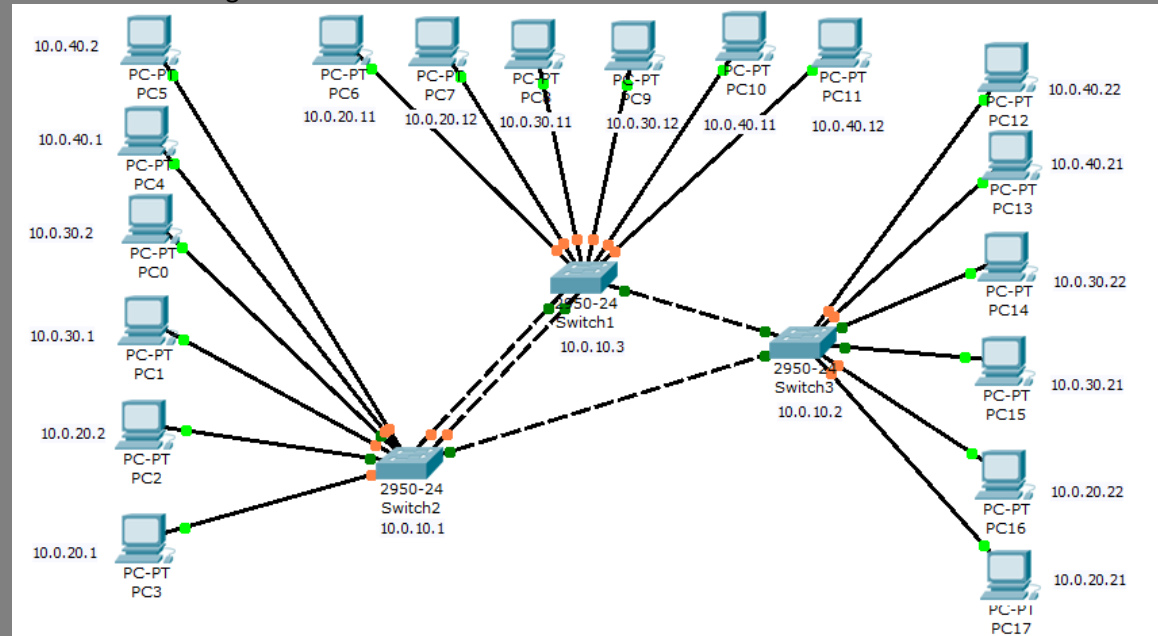
SW02 (swap alternative with root)

method 02, port priority

SW01#

```
en
config t
interface fa0/24
spanning-tree vlan 1 port-priority 64
end
copy running-config startup-config
```

### Traffic load sharing between trunks





load balancing between redundant ports
SW01-root
show spanning-tree interface FastEthernet 0/21 show spanning-tree interface FastEthernet 0/24
SW02-designated
show spanning-tree interface FastEthernet 0/21 show spanning-tree interface FastEthernet 0/24
Sw01-root
interface FastEthernet 0/24 spanning-tree vlan 3 port-priority 64 spanning-tree vlan 4 port-priority 64