



Lecture (06)

Design and Configuration

LAN – Practicing, working on CISCO equipment



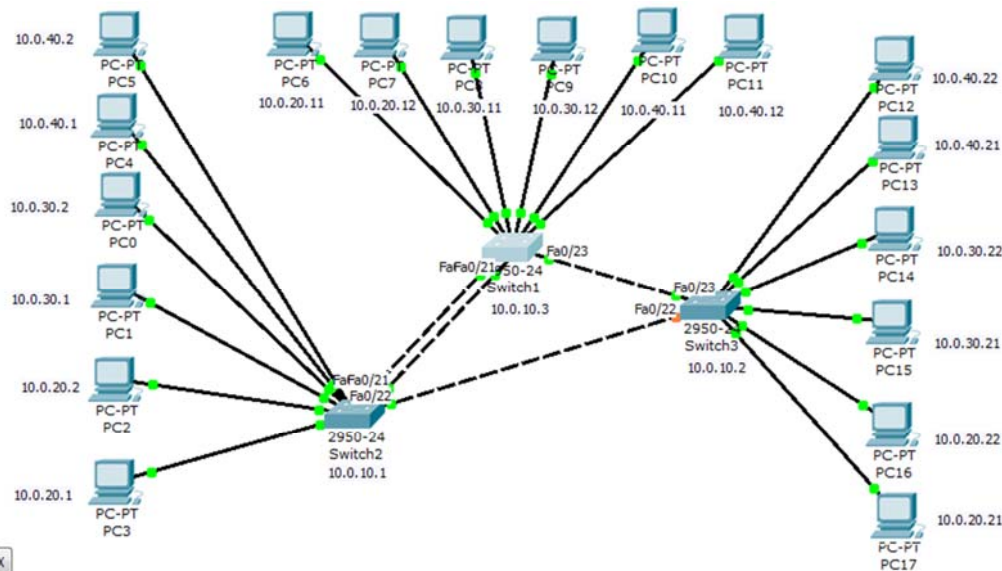
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Part I

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SW01 steps

- firstly connect all links (refer to topology)
- then start configuring your switch:
- Enable switch
- Open configuration mode
- Set hostname
- Enable telnet
- Set enable password
- Set secret passwords
- Give switch IP (refer to topology)
- Set vtp domain name
- Set vtp mode
- Create vlans

-
- Set all ports speed to auto, duplex to auto
 - Set ports 21-24 to trunk mode
 - Set ports 1-5 access vlan 2
 - Set ports 6-10 access vlan 2
 - Set ports 11-15 access vlan 2
 - Set switch as root
 - Exit configuration mode
 - configure PCs giving each PC IP/Mask (refer to topology)
 - *****

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- Troubleshooting
 - *****
 - Display all vlans
 - Display all interfaces
 - Display spanning tree status on different vlans and trunk interfaces
 - Make sure switch can communicate with other switches
 - Make sure that PC connected to that switch can access other PCs that are connected to different switches on the same vlan
 - try to access switch remotely using telnet
 - *****

SW 02,03 steps

- firstly connect all links (refer to topology)
- then start configuring your switch:
- Enable switch
- Open configuration mode
- Set hostname
- Enable telnet
- Set enable password
- Set secret passwords
- Give switch IP (refer to topology)
- Set vtp domain name
- Set vtp mode
- Set all ports speed to auto, duplex to auto

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- Set ports 21-24 to trunk mode
 - check vlans (make sure all vlans are exist)
 - Set ports 1-5 access vlan 2
 - Set ports 6-10 access vlan 2
 - Set ports 11-15 access vlan 2
 - Set switch as root
 - Exit configuration mode
 - configure PCs giving each PC IP/Mask (refer to topology)
 - *****

- Troubleshooting
- *****
- Display all vlans
- Display all interfaces
- Display spanning tree status on different vlans and trunk interfaces
- Make sure switch can communicate with other switches
- Make sure that PC connected to that switch can access other PCs that are connected to different switches on the same vlan
- try to access switch remotely using telnet
- *****

Switch I

```

enabl
config t
hostname SW01

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 Finance

vlan 3
name HR

vlan 4
name Admin

interface range fa0/1-24
speed auto
duplex auto

interface range fa0/21-24
switchport mode trunk

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

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

end

show vlan
show ip interface brief
show spanning-tree vlan 1
show spanning-tree interface FastEthernet
0/21

```

---

# Switch 2

```
enabl
config t
hostname SW02
```

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

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

```
enable password cisco
```

```
enable secret cisco1
```

```
interface vlan 1
ip address 10.0.10.2 255.255.255.0
no shutdown
```

```
vtp domain ACU
vtp mode client
```

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

```
interface range fa0/21-24
switchport mode trunk
```

```
end
```

```
show vlan
```

```
config t
```

```
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
```

---

```
end

show vlan
show ip interface brief
show spanning-tree vlan 1
show spanning-tree interface FastEthernet
0/21
```

---

# Part 3

```
enabl
config t
hostname SW03
```

```
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
```

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

```
interface range fa0/21-24
switchport mode trunk
```

```
end
```

```
show vlan
```

```
config t
```

```
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

end

show vlan
show ip interface brief
show spanning-tree vlan 1
show spanning-tree interface FastEthernet
0/21
```

