

1.Router R1

enable

configure terminal

hostname R1

enable secret Cisco123

username admin secret Cisco123

line console0

password Cisco123

login

logging synchronousexit

line vty04

password Cisco123

login

transport inputtelnetexit

banner motd#

* BBU TECHNOLOGY CENTER NETWORK *

* Unauthorized Access Prohibited *

*****#

interface GigabitEthernet0/1

no shutdownexit

```
interface GigabitEthernet0/1.10
encapsulation dot1Q10
ip address 192.168.10.1 255.255.255.0 exit
```

```
interface GigabitEthernet0/1.20
encapsulation dot1Q20
ip address 192.168.20.1 255.255.255.0 exit
```

```
interface GigabitEthernet0/1.30
encapsulation dot1Q30
ip address 192.168.30.1 255.255.255.0 exit
```

```
interface GigabitEthernet0/1.99
encapsulation dot1Q99 native
ip address 192.168.99.1 255.255.255.0 exit
```

```
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.20.1
ip dhcp excluded-address 192.168.30.1
ip dhcp excluded-address 192.168.99.1
```

```
ip dhcp pool ADMIN
network 192.168.10.0 255.255.255.0
default-router 192.168.10.1
dns-server 8.8.8.8 exit
```

```
ip dhcp pool FINANCE
network 192.168.20.0 255.255.255.0
default-router 192.168.20.1
dns-server 8.8.8.8 exit
```

```
ip dhcp pool STUDENT
network 192.168.30.0 255.255.255.0
default-router 192.168.30.1
dns-server 8.8.8.8 exit
```

```
ip dhcp pool MGMT
network 192.168.99.0 255.255.255.0
default-router 192.168.99.1
dns-server 8.8.8.8 exit
```

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

2. Core Switch S1

```
enable
configure terminal
```

```
hostname S1
```

```
enable secret Cisco123
username admin secret Cisco123
```

```
line console0
password Cisco123
login
logging synchronousexit
```

```
line vty015
password Cisco123
login
transport inputtelnetexit
```

```
banner motd#
*****
*      CORE SWITCH      *
*****#
```

```
vlan10
name ADMINISTRATIONexit
```

```
vlan20
name FINANCEexit
```

```
vlan30
name STUDENTexit
```

```
vlan99
name MANAGEMENTexit
```

```
interface GigabitEthernet0/1
switchport mode trunk
switchport trunk native vlan99
switchport trunk allowed vlan10,20,30,99
no shutdownexit
```

```
interface range FastEthernet0/1-2
switchport mode trunk
switchport trunk native vlan99
switchport trunk allowed vlan10,20,30,99
channel-group1 mode desirable
no shutdownexit
```

```
interface Port-channel1
switchport mode trunk
switchport trunk native vlan99
switchport trunk allowed vlan10,20,30,99exit
```

```
interface range FastEthernet0/3-4
switchport mode trunk
switchport trunk native vlan99
switchport trunk allowed vlan10,20,30,99
channel-group2 mode desirable
no shutdownexit
```

```
interface Port-channel2
switchport mode trunk
```

```
switchport trunk native vlan99
switchport trunk allowed vlan10,20,30,99exit
```

```
interface vlan99
ip address192.168.99.2255.255.255.0
no shutdownexit
```

```
ip default-gateway192.168.99.1
```

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

3. Access Switch S2

```
enable
configure terminal
```

```
hostname S2
```

```
enable secret Cisco123
username admin secret Cisco123
```

```
line console0
password Cisco123
login
logging synchronousexit
```

```
line vty015
```

```
password Cisco123
login
transport input telnet exit
```

```
vlan 10
name ADMINISTRATION exit
```

```
vlan 20
name FINANCE exit
```

```
vlan 30
name STUDENT exit
```

```
vlan 99
name MANAGEMENT exit
```

```
interface range FastEthernet0/1-2
switchport mode trunk
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,99
channel-group 1 mode auto
no shutdown exit
```

```
interface Port-channel1
switchport mode trunk
switchport trunk native vlan 99
switchport trunk allowed vlan 10,20,30,99 exit
```

```
interface range FastEthernet0/5-6
switchport mode access
switchport access vlan10
spanning-tree portfast
no shutdown
exit
```

```
interface range FastEthernet0/7-8
switchport mode access
switchport access vlan20
spanning-tree portfast
no shutdown
exit
```

```
interface range FastEthernet0/9-10
switchport mode access
switchport access vlan30
spanning-tree portfast
no shutdown
exit
```

```
interface vlan99
ip address 192.168.99.32 255.255.255.0
no shutdown
exit
```

```
ip default-gateway 192.168.99.1
```

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

4. Access Switch S3

enable

configure terminal

hostname S3

enable secret Cisco123

username admin secret Cisco123

line console0

password Cisco123

login

logging synchronousexit

line vty015

password Cisco123

login

transport inputtelnetexit

vlan10

name ADMINISTRATIONexit

vlan20

name FINANCEexit

vlan30

name STUDENTexit

vlan99

name MANAGEMENTexit

interface range FastEthernet0/1-2

switchport mode trunk

switchport trunk native vlan99

switchport trunk allowed vlan10,20,30,99

channel-group2 mode auto

no shutdownexit

interface Port-channel2

switchport mode trunk

switchport trunk native vlan99

switchport trunk allowed vlan10,20,30,99exit

interface range FastEthernet0/5-6

switchport mode access

switchport access vlan10

spanning-tree portfast

no shutdownexit

interface range FastEthernet0/7-8

switchport mode access

switchport access vlan20

spanning-tree portfast

no shutdownexit

interface range FastEthernet0/9-10

switchport mode access

switchport access vlan30

spanning-tree portfast

no shutdownexit

interface vlan99

ip address192.168.99.4255.255.255.0

no shutdownexit

ip default-gateway192.168.99.1

end

copy running-config startup-config

5. PC Configuration

លើ PC ទាំងអស់៖

Desktop

→ IP Configuration

→ DHCP