Segmentation du réseau

1-\ Adressage :

Plage ip des téléphones (148 téléphones) :

@ réseau : 192.168.0.0/24

Masque : 255.255.255.0

Allant de 192.168.0.0

jusqu'à 192.168.0.255

nombre de ports disponible : **254**

VLAN : 2

Service opérationnel (104 personnes) :

@ réseau : 192.168.1.0/25

Masque : 255.255.255.128

Allant de 192.168.1.0

jusqu'à 192.168.1.127

nombre de ports disponible : **126**

VLAN : 3

Service commercial (24 personnes) :

@ réseau : 192.168.1.128/27

Masque : 255.255.255.224

Allant de 192.168.1.128

jusqu'à 192.168.1.159

nombre de ports disponible : **30**

VLAN : 4

Service RH (10 personnes) :

@ réseau : 192.168.1.160/28

Masque : 255.255.255.240

Allant de 192.168.1.160

jusqu'à 192.168.1.175

nombre de ports disponible : **14**

VLAN : 5

Service comptabilité (6 personnes) :

@ réseau : 192.168.1.176/28

Masque : 255.255.255.240

Allant de 192.168.1.176

jusqu'à 192.168.1.191

nombre de ports disponible : **14**

VLAN : 6

Service informatique (4 personnes) :

@ réseau : 192.168.1.192/28

Masque : 255.255.255.240

Allant de 192.168.1.192

jusqu'à 192.168.1.207

nombre de ports disponible : **14**

VLAN : 7

Salle machine (1 serveur) :

@ réseau : 192.168.1.208/28

Masque : 255.255.255.240

Allant de 192.168.1.208

jusqu'à 192.168.1.223

nombre de ports disponible : **14**

VLAN : 8

Salle imprimante (2 imprimantes) :

@ réseau : 192.168.1.224/29

Masque : 255.255.255.248

Allant de 192.168.1.204

jusqu'à 192.168.1.231

nombre de ports disponible : **6**

VLAN : 9

Salle DMZ (1 serveur) :

@ réseau : 192.168.2.0/28

Masque : 255.255.255.240

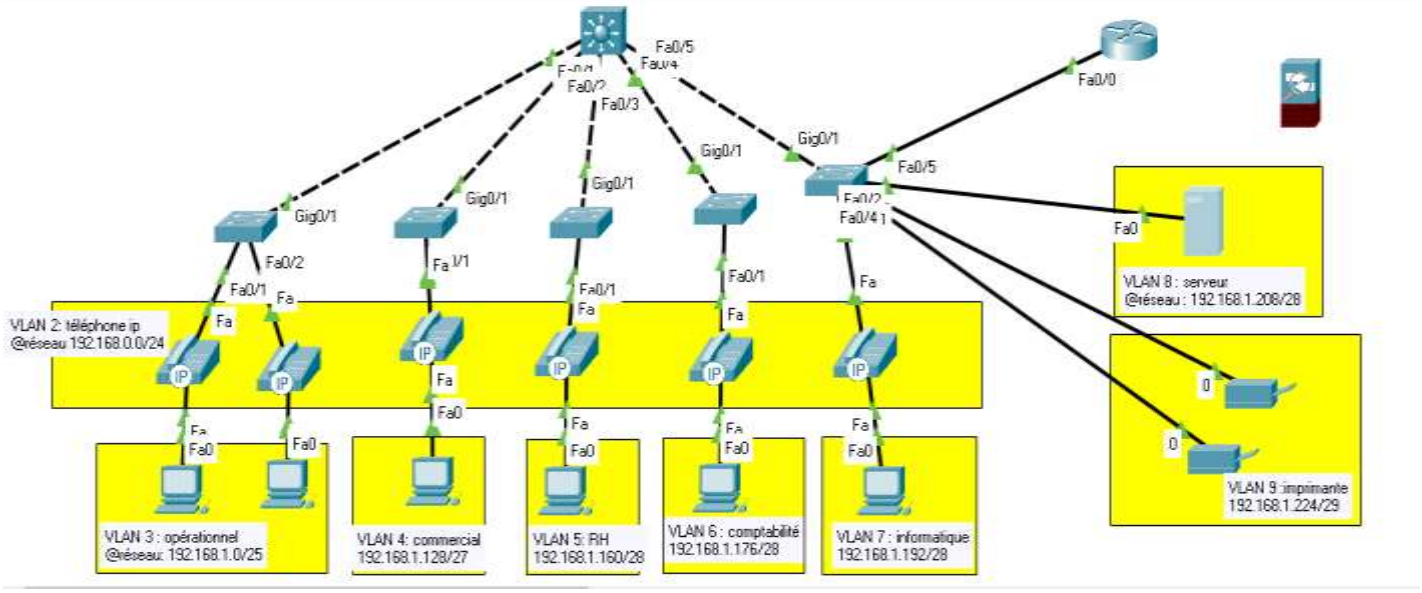
Allant de 192.168.2.0

jusqu'à 192.168.2.15

nombre de ports disponible : **14**

VLAN : 10

2-\ La mise en place et la configuration de l'infrastructure



Configuration de switch principal :

```
Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWITCH_CORE
SWITCH_CORE(config)#vlan 2
SWITCH_CORE(config-vlan)#name telephone
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 3
SWITCH_CORE(config-vlan)#name operationnel
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 4
SWITCH_CORE(config-vlan)#name commercial
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 5
SWITCH_CORE(config-vlan)#name rh
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 6
SWITCH_CORE(config-vlan)#name comptabilite
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 7
SWITCH_CORE(config-vlan)#name informatique
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 8
SWITCH_CORE(config-vlan)#name serveur
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#vlan 9
```

```
SWITCH_CORE(config-vlan)#name imprimante
SWITCH_CORE(config-vlan)#exit
SWITCH_CORE(config)#interface vlan 2
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan2, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.0.1 255.255.255.0
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 3
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan3, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.1 255.255.255.128
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 4
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan4, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.129 255.255.255.224
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 5
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan5, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.161 255.255.255.240
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 6
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan6, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.177 255.255.255.240
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 7
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan7, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.193 255.255.255.240
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 8
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan8, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.209 255.255.255.240
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 9
SWITCH_CORE(config-if)#
%LINK-5-CHANGED: Interface Vlan9, changed state to up

SWITCH_CORE(config-if)#ip address 192.168.1.225 255.255.255.248
SWITCH_CORE(config-if)#exit
```

```
SWITCH_CORE(config)#interface fastEthernet 0/1
SWITCH_CORE(config-if)#switchport trunk encapsulation dot1q
SWITCH_CORE(config-if)#description TO_SWITCH_1
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface fastEthernet 0/2
SWITCH_CORE(config-if)#switchport trunk encapsulation dot1q
SWITCH_CORE(config-if)#description TO_SWITCH_2
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface fastEthernet 0/3
SWITCH_CORE(config-if)#switchport trunk encapsulation dot1q
SWITCH_CORE(config-if)#description TO_SWITCH_3
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface fastEthernet 0/4
SWITCH_CORE(config-if)#switchport trunk encapsulation dot1q
SWITCH_CORE(config-if)#description TO_SWITCH_4
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface fastEthernet 0/5
SWITCH_CORE(config-if)#switchport trunk encapsulation dot1q
SWITCH_CORE(config-if)#description TO_SWITCH_5
SWITCH_CORE(config-if)#exit


SWITCH_CORE(config)#do sh vlan

VLAN Name Status Ports
---- -------------------------------- --------- -------------------------------
1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4
Fa0/5, Fa0/6, Fa0/7, Fa0/8
Fa0/9, Fa0/10, Fa0/11, Fa0/12
Fa0/13, Fa0/14, Fa0/15, Fa0/16
Fa0/17, Fa0/18, Fa0/19, Fa0/20
Fa0/21, Fa0/22, Fa0/23, Fa0/24
Gig0/1, Gig0/2
2 telephone active
3 operationnel active
4 commercial active
5 rh active
6 comptabilite active
7 informatique active
8 serveur active
9 imprimante active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

SWITCH_CORE(config)#vtp mode server
Device mode already VTP SERVER.
```

```
SWITCH_CORE(config)#vtp domain IT_INFRA
Changing VTP domain name from NULL to IT_INFRA


SWITCH_CORE(config)#interface vlan 2
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 3
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 9
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
SWITCH_CORE(config-if)#exit


SWITCH_CORE(config)#interface vlan 4
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 5
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 6
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
SWITCH_CORE(config-if)#exit
SWITCH_CORE(config)#interface vlan 7
SWITCH_CORE(config-if)#ip helper-address 192.168.1.210
```

Configuration de switch 0

```
Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWITCH_1
SWITCH_1(config)#interface gi
SWITCH_1(config)#interface gigabitEthernet 0/1
SWITCH_1(config-if)#switchport mode trunk

SWITCH_1(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
up

SWITCH_1(config-if)#descrip
SWITCH_1(config-if)#description TO_SWITCH_CORE
SWITCH_1(config-if)#vtp mode client
Setting device to VTP CLIENT mode.
SWITCH_1(config)#vtp domain IT_INFRA
```

```
Domain name already set to IT_INFRA.
SWITCH_1(config)#do sh vlan

VLAN Name Status Ports
---- -------------------------------- --------- -------------------------------
1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4
Fa0/5, Fa0/6, Fa0/7, Fa0/8
Fa0/9, Fa0/10, Fa0/11, Fa0/12
Fa0/13, Fa0/14, Fa0/15, Fa0/16
Fa0/17, Fa0/18, Fa0/19, Fa0/20
Fa0/21, Fa0/22, Fa0/23, Fa0/24
Gig0/2
2 telephone active
3 operationnel active
4 commercial active
5 rh active
6 comptabilite active
7 informatique active
8 serveur active
9 imprimante active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

SWITCH_1(config)#

SWITCH_1(config)#interface fastEthernet 0/1
SWITCH_1(config-if)#switchport mode access
SWITCH_1(config-if)#switchport access vlan 3
SWITCH_1(config-if)#exit
SWITCH_1(config)#interface fastEthernet 0/1
SWITCH_1(config-if)#switchport voice vlan 2
SWITCH_1(config-if)#exit
SWITCH_1(config)#interface fastEthernet 0/2
SWITCH_1(config-if)#switchport mode access
SWITCH_1(config-if)#switchport access vlan 3
SWITCH_1(config-if)#switchport voice vlan 2
SWITCH_1(config-if)#exit
SWITCH_1(config)#exit

SWITCH_1#sh run
Building configuration...

Current configuration : 1283 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
```

```
hostname SWITCH_1
!
!
!
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
switchport access vlan 3
switchport mode access
switchport voice vlan 2
!
interface FastEthernet0/2
switchport access vlan 3
switchport mode access
switchport voice vlan 2
```

Configuration de switch 1

```
Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWITCH_2
SWITCH_2(config)#interface gi
SWITCH_2(config)#interface gigabitEthernet 0/1
SWITCH_2(config-if)#switchport mode trunk

SWITCH_2(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
up

SWITCH_2(config-if)#description TO_SWITCH_CORE
SWITCH_2(config-if)#exit
SWITCH_2(config)#vtp mode client
Setting device to VTP CLIENT mode.
SWITCH_2(config)#vtp domain IT_INFRA
Domain name already set to IT_INFRA.
SWITCH_2(config)#do sh vlan

VLAN Name Status Ports
---- -------------------------------- --------- -------------------------------
1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4
```

Fa0/5, Fa0/6, Fa0/7, Fa0/8
Fa0/9, Fa0/10, Fa0/11, Fa0/12
Fa0/13, Fa0/14, Fa0/15, Fa0/16
Fa0/17, Fa0/18, Fa0/19, Fa0/20
Fa0/21, Fa0/22, Fa0/23, Fa0/24
Gig0/2
2 telephone active
3 operationnel active
4 commercial active
5 rh active
6 comptabilite active
7 informatique active
8 serveur active
9 imprimante active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

SWITCH_2(config)#interface fastEthernet 0/1
SWITCH_2(config-if)#switchport mode access
SWITCH_2(config-if)#switchport access vlan 4
SWITCH_2(config-if)#switchport voice vlan 2
SWITCH_2(config-if)#exit

Configuration de switch 2

Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWITCH_3
SWITCH_3(config)#interface gi
SWITCH_3(config)#interface gigabitEthernet 0/1
SWITCH_3(config-if)#switchport mode trunk

SWITCH_3(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

SWITCH_3(config-if)#description TO_SWITCH_CORE
SWITCH_3(config-if)#exit
SWITCH_3(config)#vtp mode client
Setting device to VTP CLIENT mode.
SWITCH_3(config)#vtp domain IT_INFRA
Domain name already set to IT_INFRA.
SWITCH_3(config)#do sh vlan

VLAN Name Status Ports

---- -------------------------------- --------- -------------------------------
1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4
Fa0/5, Fa0/6, Fa0/7, Fa0/8
Fa0/9, Fa0/10, Fa0/11, Fa0/12
Fa0/13, Fa0/14, Fa0/15, Fa0/16
Fa0/17, Fa0/18, Fa0/19, Fa0/20
Fa0/21, Fa0/22, Fa0/23, Fa0/24
Gig0/2
2 telephone active
3 operationnel active
4 commercial active
5 rh active
6 comptabilite active
7 informatique active
8 serveur active
9 imprimante active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active

SWITCH_3(config)#interface fa
SWITCH_3(config)#interface fastEthernet 0/1
SWITCH_3(config-if)#switchport mode access
SWITCH_3(config-if)#switchport access vlan 5
SWITCH_3(config-if)#switchport voice vlan 2

Configuration de switch 3

Switch>enable
Switch#
Switch#
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWITCH_4
SWITCH_4(config)#inter
SWITCH_4(config)#interface gi
SWITCH_4(config)#interface gigabitEthernet 0/1
SWITCH_4(config-if)#switchport mode trunk

SWITCH_4(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

SWITCH_4(config-if)#des
SWITCH_4(config-if)#description TO_SWITCH_CORE

```
SWITCH_4(config-if)#exit
SWITCH_4(config)#vtp mode client
Setting device to VTP CLIENT mode.
SWITCH_4(config)#vtp domain IT_INFRA
Domain name already set to IT_INFRA.
SWITCH_4(config)#interface fa
SWITCH_4(config)#interface fastEthernet 0/1
SWITCH_4(config-if)#switchport mode access
SWITCH_4(config-if)#switchport access vlan 6
SWITCH_4(config-if)#switchport voice vlan 2
SWITCH_4(config-if)#exit
SWITCH_4(config)#
```

Configuration de switch 4

```
Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname SWITCH_5
SWITCH_5(config)#inter
SWITCH_5(config)#interface gi
SWITCH_5(config)#interface gigabitEthernet 0/1
SWITCH_5(config-if)#switchport mode trunk

SWITCH_5(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
up

SWITCH_5(config-if)#description TO_SWITCH_CORE
SWITCH_5(config-if)#exit
SWITCH_5(config)#vtp mode client
Setting device to VTP CLIENT mode.
SWITCH_5(config)#vtp domain IT_INFRA
Domain name already set to IT_INFRA.
SWITCH_5(config)#interface fa
SWITCH_5(config)#interface fastEthernet 0/1
SWITCH_5(config-if)#switchport mode access
SWITCH_5(config-if)#switchport access vlan 7
SWITCH_5(config-if)#switchport voice vlan 2
SWITCH_5(config-if)#exit

SWITCH_5(config)#interface fastEthernet 0/2
SWITCH_5(config-if)#switchport mode access
```

SWITCH_5(config-if)#switchport access vlan 8
SWITCH_5(config-if)#exit

SWITCH_5(config)#interface fastEthernet 0/3
SWITCH_5(config-if)#switchport mode access
SWITCH_5(config-if)#switchport access vlan 9
SWITCH_5(config-if)#exit

SWITCH_5(config)#interface fastEthernet 0/4
SWITCH_5(config-if)#switchport mode access
SWITCH_5(config-if)#switchport access vlan 8
SWITCH_5(config-if)#exit

SWITCH_5(config)#interface fastEthernet 0/5
SWITCH_5(config-if)#switchport mode trunk
SWITCH_5(config-if)# description TO_ROUTER
SWITCH_5(config-if)#exit

Configuration de Router 0

Router(config)# hostname CUCM
CUCM# conf t
CUCM(config)#int fa 0/0

CUCM(config-if)#no shutdown

CUCM(config-if)#exit

CUCM(config)#int fa 0/0.5

CUCM(config-subif)# encapsulation dot1Q 2

CUCM(config-subif)# ip address 192.168.0.2 255.255.255.0

CUCM(config-subif)# ip helper-address 192.168.1.210

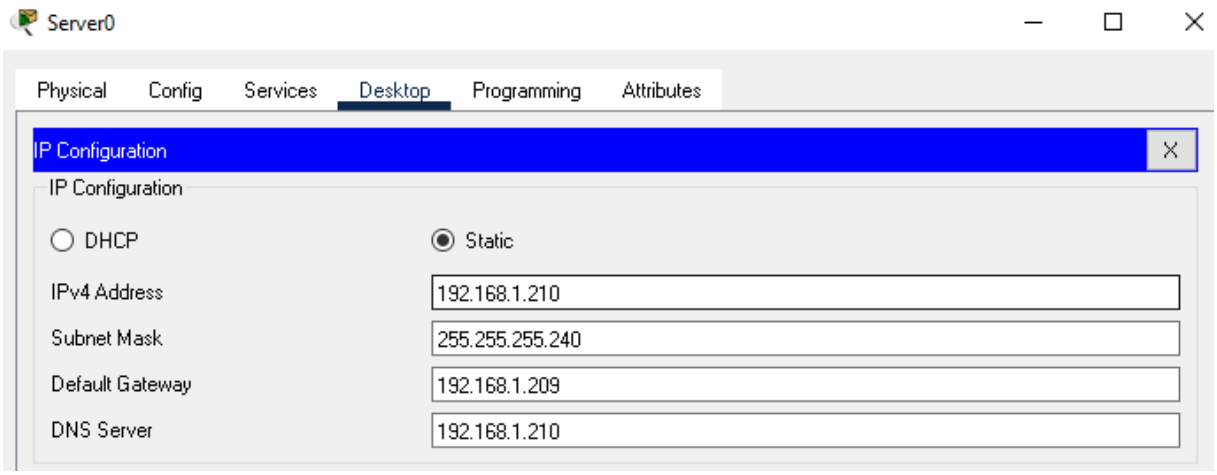
CUCM(config-subif)#exit

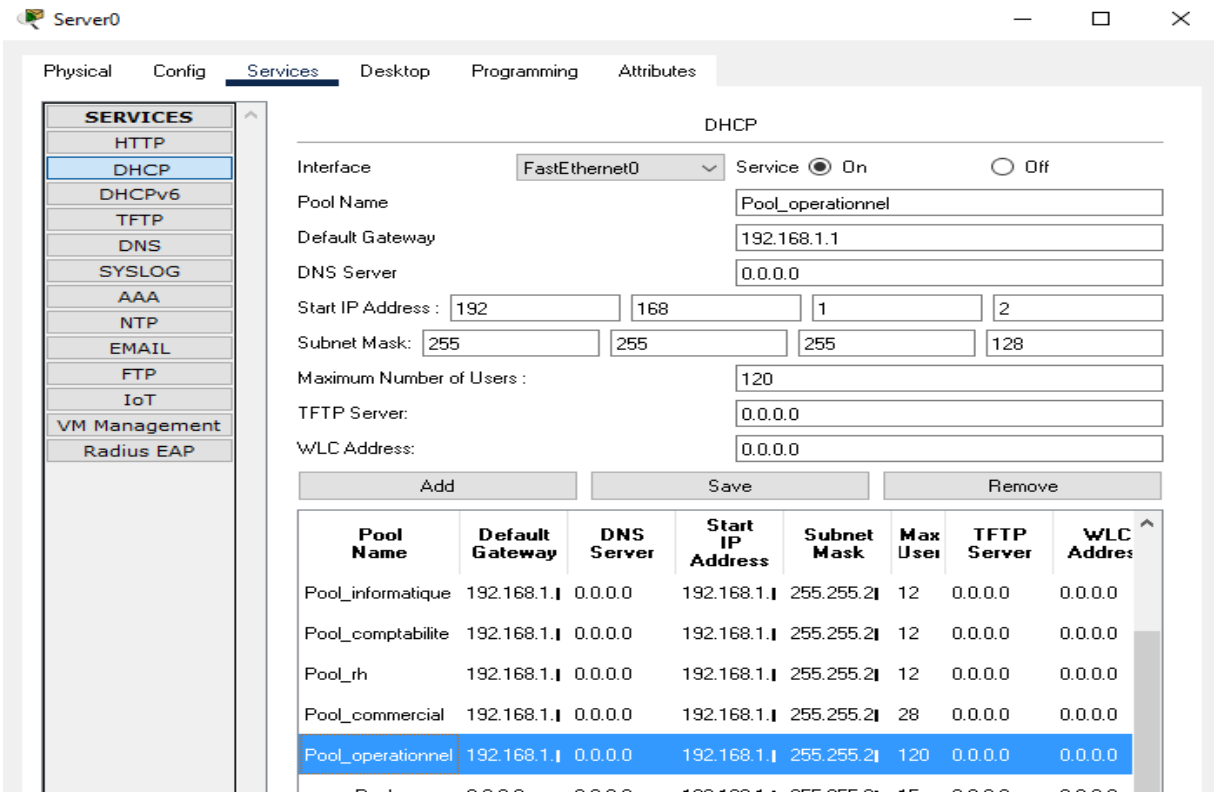
CUCM(config)# telephony-service
CUCM(config-telephony)# max-dn 30
CUCM(config-telephony)# max-ephones 15
CUCM(config-telephony)# ip source-address 192.168.0.2 port 2000
CUCM(config-telephony)# exit
CUCM(config)# ephone-dn 1
CUCM(config-ephone-dn)# number 5001
CUCM(config-ephone-dn)#exit
CUCM(config)# ephone-dn 2
CUCM(config-ephone-dn)# number 5002
CUCM(config-ephone-dn)#exit
CUCM(config)# ephone-dn 3
CUCM(config-ephone-dn)# number 5003
CUCM(config-ephone-dn)#exit
CUCM(config)# ephone-dn 4
CUCM(config-ephone-dn)# number 5004

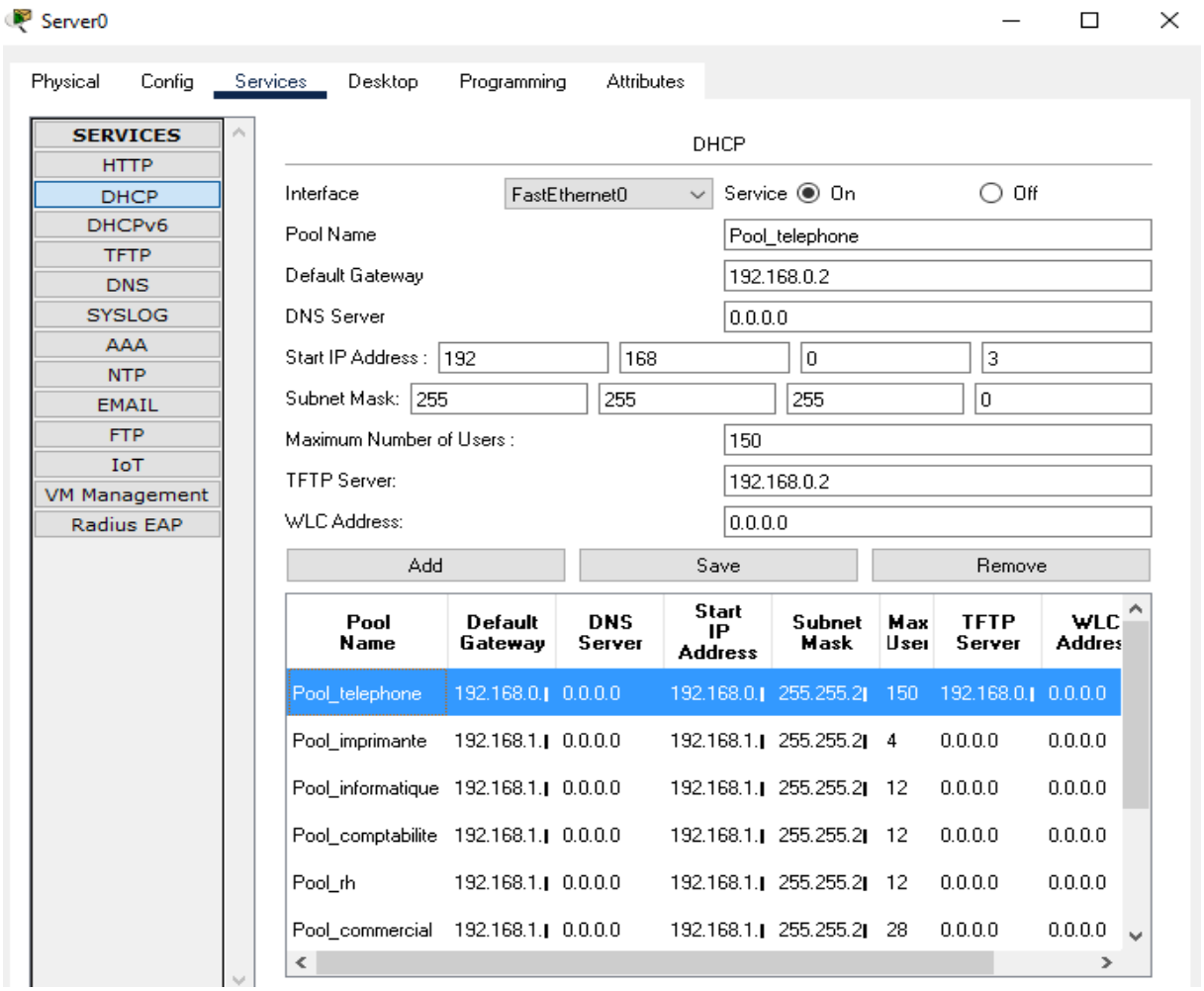
```
CUCM(config-ephone-dn)#exit
CUCM(config)# ephone-dn 5
CUCM(config-ephone-dn)# number 5005
CUCM(config-ephone-dn)#exit
CUCM(config)# ephone-dn 6
CUCM(config-ephone-dn)# number 5006
CUCM(config-ephone-dn)#exit
CUCM(config)# ephone-dn 7
CUCM(config-ephone-dn)# number 5007
CUCM(config-ephone-dn)#exit
CUCM#sh ephone

ephone-1 Mac:00D0.D381.DE32 TCP socket:[1] activeLine:1 UNREGISTERED
mediaActive:0 offhook:1 ringing:0 reset:0 reset_sent:0 paging 0 debug:0 caps:8
IP:0.0.0.0 0 keepalive 43 max_line 2
button 1: dn CH1 DOWN

ephone-2 Mac:00D0.9783.421E TCP socket:[1] activeLine:1 UNREGISTERED
mediaActive:0 offhook:1 ringing:0 reset:0 reset_sent:0 paging 0 debug:0 caps:8
IP:0.0.0.0 0 keepalive 43 max_line 2
button 1: dn CH1 DOWN

ephone-3 Mac:0001.C734.2C1E TCP socket:[1] activeLine:1 UNREGISTERED
mediaActive:0 offhook:1 ringing:0 reset:0 reset_sent:0 paging 0 debug:0 caps:8
IP:0.0.0.0 0 keepalive 43 max_line 2
button 1: dn CH1 DOWN

ephone-4 Mac:00E0.F7AA.891B TCP socket:[1] activeLine:1 UNREGISTERED
mediaActive:0 offhook:1 ringing:0 reset:0 reset_sent:0 paging 0 debug:0 caps:8
IP:0.0.0.0 0 keepalive 43 max_line 2
button 1: dn CH1 DOWN

ephone-5 Mac:00D0.BA63.A4BE TCP socket:[1] activeLine:1 UNREGISTERED
--More--
CUCM#conf t
Enter configuration commands, one per line. End with CNTL/Z.
CUCM(config)#ephone 1
CUCM(config-ephone)#button 1:1
CUCM(config-ephone)#
%IPPHONE-6-REGISTER: ephone-1 IP:192.168.0.6 Socket:2 DeviceType:Phone has regis-
tered.
CUCM(config-ephone)#exit
CUCM(config)#ephone 2
CUCM(config-ephone)#button 1:2
CUCM(config-ephone)#
%IPPHONE-6-REGISTER: ephone-2 IP:192.168.0.8 Socket:2 DeviceType:Phone has regis-
tered.

CUCM(config-ephone)#exit
CUCM(config)#ephone 3
```

```
CUCM(config-ephone)#button 1:3
CUCM(config-ephone)#
%IPPHONE-6-REGISTER: ephone-3 IP:192.168.0.9 Socket:2 DeviceType:Phone has regis-
tered.
exit
CUCM(config)#ephone 4
CUCM(config-ephone)#button 1:4
CUCM(config-ephone)#
%IPPHONE-6-REGISTER: ephone-4 IP:192.168.0.10 Socket:2 DeviceType:Phone has regis-
tered.

CUCM(config-ephone)#exit
CUCM(config)#ephone 5
CUCM(config-ephone)#button 1:5
CUCM(config-ephone)#
%IPPHONE-6-REGISTER: ephone-5 IP:192.168.0.11 Socket:2 DeviceType:Phone has regis-
tered.

CUCM(config-ephone)#
CUCM(config-ephone)#exit
CUCM(config)#
CUCM(config)#ephone 6
CUCM(config-ephone)#button 1:6
CUCM(config-ephone)#
%IPPHONE-6-REGISTER: ephone-6 IP:192.168.0.7 Socket:2 DeviceType:Phone has regis-
tered.

CUCM(config-ephone)#exit
CUCM(config)#
CUCM(config)#ephone 7
CUCM(config-ephone)#button 1:7
Need to configure ephone mac address or VM station-id
CUCM(config-ephone)#exit
CUCM(config)#exit
CUCM#
%SYS-5-CONFIG_I: Configured from console by console

CUCM#
CUCM#
```

Configuration Server 0


Server0
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.210
Subnet Mask
255.255.255.240
Default Gateway
192.168.1.209
DNS Server
192.168.1.210


Server0
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DHCP
Interface
FastEthernet0
Service
On
Off
Pool Name
Pool_operationnel
Default Gateway
192.168.1.1
DNS Server
0.0.0.0
Start IP Address :
192
168
1
2
Subnet Mask:
255
255
255
128
Maximum Number of Users :
120
TFTP Server:
0.0.0.0
WLC Address:
0.0.0.0
Add
Save
Remove
Pool Name
Default Gateway
DNS Server
Start IP Address
Subnet Mask
Max User
TFTP Server
WLC Addres
Pool_informatique
192.168.1.
0.0.0.0
192.168.1.
255.255.2
12
0.0.0.0
0.0.0.0
Pool_comptabilite
192.168.1.
0.0.0.0
192.168.1.
255.255.2
12
0.0.0.0
0.0.0.0
Pool_rh
192.168.1.
0.0.0.0
192.168.1.
255.255.2
12
0.0.0.0
0.0.0.0
Pool_commercial
192.168.1.
0.0.0.0
192.168.1.
255.255.2
28
0.0.0.0
0.0.0.0
Pool_operationnel
192.168.1.
0.0.0.0
192.168.1.
255.255.2
120
0.0.0.0
0.0.0.0



Configuration du parefeu :

```
interface Vlan1
nameif inside
security-level 100
ip address 192.168.1.254 255.255.254.0
!
interface Vlan2
nameif outside
security-level 0
ip address 200.1.1.2 255.255.255.240
!
interface Vlan3
no forward interface Vlan1
nameif dmz
security-level 50
ip address 192.168.2.2 255.255.255.240
!
object network INTERNET
subnet 192.168.0.0 255.255.254.0
!
```

```
route outside 0.0.0.0 0.0.0.0 200.1.1.1 1
!
!
!
!
!
!
!
!
!
telnet timeout 5
ssh timeout 5
!
dhcpd auto_config outside
!
dhcpd address 192.168.0.4-192.168.0.35 inside
dhcpd enable inside
!
!
!
!
!
ASA#
ASA#
ASA#
ASA#
ASA#
ASA#
ASA#
ASA#no dhcpd address 192.168.0.4-192.168.0.35 inside
^
% Invalid input detected at '^' marker.
ASA#conf t
ASA(config)#no dhcpd address 192.168.0.4-192.168.0.35 inside
ASA(config)#exit
ASA#
ASA#
ASA#sh ru
: Saved
:
ASA Version 8.4(2)
!
hostname ASA
names
!
interface Ethernet0/0
switchport access vlan 2
!
interface Ethernet0/1
!
```

```
interface Ethernet0/2
switchport access vlan 3
!
interface Ethernet0/3
!
interface Ethernet0/4
!
interface Ethernet0/5
!
interface Ethernet0/6
!
interface Ethernet0/7
!
interface Vlan1
nameif inside
security-level 100
ip address 192.168.1.254 255.255.254.0
!
interface Vlan2
nameif outside
security-level 0
ip address 200.1.1.2 255.255.255.240
!
interface Vlan3
no forward interface Vlan1
nameif dmz
security-level 50
ip address 192.168.2.2 255.255.255.240
!
object network INTERNET
subnet 192.168.0.0 255.255.254.0
!
route outside 0.0.0.0 0.0.0.0 200.1.1.1 1
!
!
!
!
!
!
!
!
!
telnet timeout 5
ssh timeout 5
!
dhcpd auto_config outside
!
dhcpd enable inside
!
!
```

```
!
!
!
ASA#
ASA#
ASA#
ASA#
ASA#
ASA#
ASA#
ASA#conf t
ASA(config)#object network INTERNET
ASA(config-network-object)#nat(inside,outside) dynamic interface
^
% Invalid input detected at '^' marker.
ASA(config-network-object)#nat (inside,outside) dynamic interface
ASA(config-network-object)#exit
ASA#
ASA#conf t
ASA(config)#object network SERVER
ASA(config-network-object)#host 192.168.2.2
ASA(config-network-object)#nat (dmz,outside) static 200.1.1.4
ASA(config-network-object)#exit
ASA#conf t
ASA(config)#access-list DMZOUT permit tcp any any eq 80
ASA(config)#access-list DMZOUT permit icmp any any
ASA(config)#access-group DMZOUT in interface outside
ASA(config)#class-map inspection_default
ASA(config-cmap)#match ?

mode commands/options:
access-list Access List name
any Match any packets
default-inspection-traffic Match default inspection traffic:
ctiqbe----tcp--2748 dns-------udp--53
ftp-------tcp--21 gtp-------udp--2123,3386
h323-h225-tcp--1720 h323-ras--udp--1718-1719
http------tcp--80 icmp------icmp
ils-------tcp--389 ip-options-----rsvp
mgcp------udp--2427,2727 netbios---udp--137-138
radius-acct----udp--1646 rpc-------udp--111
rsh-------tcp--514 rtsp------tcp--554
sip-------tcp--5060 sip-------udp--5060
skinny----tcp--2000 smtp------tcp--25
sqlnet----tcp--1521 tftp------udp--69
waas------tcp--1-65535 xdmcp-----udp--177
ASA(config-cmap)#match DE
ASA(config-cmap)#match de
ASA(config-cmap)#match default-inspection-traffic
ASA(config-cmap)#exit
```

```
ASA(config)#policy-map globa_policy
ASA(config-pmap)#class inspection_default
ASA(config-pmap-c)#inspect?

mode commands/options:
inspect
ASA(config-pmap-c)#inspect ?

mode commands/options:
dns
ftp
h323
http
icmp
tftp
ASA(config-pmap-c)#inspect icmp
ASA(config-pmap-c)#exit
ASA(config)#service-policy globa_policy global
ASA(config)#end
ASA#wr mem
Building configuration...
Cryptochecksum: 68951b17 71625478 1f027260 127756e6

1346 bytes copied in 1.862 secs (722 bytes/sec)
[OK]
ASA#
```

Configuration firewall fonctionnel

ciscoasa(config)#configure factory-default 192.168.1.233 255.255.254.0

```
ciscoasa#sh ru
: Saved
:
ASA Version 8.4(2)
!
hostname ciscoasa
names
!
interface Ethernet0/0
switchport access vlan 2
!
interface Ethernet0/1
!
interface Ethernet0/2
switchport access vlan 3
!
interface Ethernet0/3
!
interface Ethernet0/4
!
interface Ethernet0/5
!
interface Ethernet0/6
!
interface Ethernet0/7
!
interface Vlan1
nameif inside
security-level 100
ip address 192.168.1.233 255.255.254.0
!
interface Vlan2
nameif outside
security-level 0
ip address 200.1.1.2 255.255.255.240
!
interface Vlan3
no forward interface Vlan1
nameif dmz
security-level 50
ip address 192.168.2.2 255.255.255.240
!
object network INTERNET
```

```
subnet 192.168.0.0 255.255.254.0
object network SERVERWEB
host 192.168.2.5
!
route outside 0.0.0.0 0.0.0.0 200.1.1.1 1
route inside 192.168.0.0 255.255.254.0 192.168.1.234 1
!
access-list DMZOUT extended permit tcp any any eq www
access-list DMZOUT extended permit icmp any any
!
!
access-group DMZOUT in interface outside
object network INTERNET
nat (inside,outside) dynamic interface
object network SERVERWEB
nat (dmz,outside) static 200.1.1.4
!
!
!
class-map inspection_default
match default-inspection-traffic
!
policy-map globa_policy
class inspection_default
inspect icmp
!
service-policy globa_policy global
!
telnet timeout 5
ssh timeout 5
!
dhcpd auto_config outside
!
dhcpd address 192.168.1.254-192.168.2.29 inside
dhcpd enable inside
!
```

Configuration firewall non fonctionnel mais interessante :

```
ASA#sh ru
: Saved
:
ASA Version 8.4(2)
!
hostname ASA
names
!
interface Ethernet0/0
switchport access vlan 2
!
```

```
interface Ethernet0/1
!
interface Ethernet0/2
switchport access vlan 3
!
interface Ethernet0/3
!
interface Ethernet0/4
!
interface Ethernet0/5
!
interface Ethernet0/6
!
interface Ethernet0/7
!
interface Vlan1
nameif inside
security-level 0
ip address 172.16.0.1 255.255.255.240
!
interface Vlan2
no forward interface Vlan1
nameif outside
security-level 0
ip address 200.1.1.2 255.255.255.240
!
interface Vlan3
nameif dmz
security-level 50
ip address 192.168.2.2 255.255.255.240
!
object network LAN
subnet 172.16.0.0 255.255.255.240
object network SERVER
host 192.168.2.5
object network VLAN4
subnet 192.168.1.128 255.255.255.224
object network VLAN5
subnet 192.168.1.160 255.255.255.240
object network VLAN8
subnet 192.168.1.208 255.255.255.240
object network VLANOP
subnet 192.168.1.0 255.255.255.128
!
route inside 192.168.1.0 255.255.255.128 172.16.0.2 1
route inside 192.168.1.128 255.255.255.224 172.16.0.2 1
route inside 192.168.1.160 255.255.255.240 172.16.0.2 1
route inside 192.168.1.208 255.255.255.240 172.16.0.2 1
route outside 0.0.0.0 0.0.0.0 200.1.1.1 1
route inside 192.168.1.192 255.255.255.240 172.16.0.2 1
```

```
!
access-list DMZOUT extended permit tcp any any eq www
access-list DMZOUT extended permit icmp any any
!
!
access-group DMZOUT in interface outside
object network LAN
nat (inside,outside) dynamic interface
object network SERVER
nat (dmz,outside) static 200.1.1.4
object network VLAN4
nat (inside,outside) dynamic interface
object network VLAN5
nat (inside,outside) dynamic interface
object network VLANOP
nat (inside,outside) dynamic interface
!
!
!
class-map inspection_default
match default-inspection-traffic
!
policy-map globa_policy
class inspection_default
inspect icmp
!
service-policy globa_policy global
!
telnet timeout 5
ssh timeout 5
!
dhcpd auto_config outside
```