

# Hospital network

Communication & Network Fundamentals

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Hospital departments face a lot of problems during communication such as transferring the patient file between departments and storing patients and employee's information. This problem will be solved by building a LAN network that simplify the communicating between all hospital departments and patients including health care providers and other professionals.

## Goals of the project:

1. Simplify the communication between hospital departments.
2. Ease of access to patient information for doctors
3. Design a hospital network that meet all the requirements of the hospital needs.

### ■ Configuration 3 routers

#### ➤ Router 0

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config)#interface GigabitEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 10.1.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#ip route 192.168.0.0 255.255.255.0 10.1.1.1
Router(config)#exit
Router#
Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#reload
Proceed with reload? [confirm]
```

- **switch**

- **Switch “Ground Floor”**

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.\
Switch(config)#service password-encryption
Switch(config)#enable secret SSR2021
Switch (config)#
Switch (config)#line cons 0
Switch (config-line)#password CIS315
Switch (config-line)#login
Switch (config-line)#login sy
Switch (config-line)#login synchronous
Switch (config-line)#end
Switch #copy running-config startup-config
```

- **Switch “First floor”**

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.\
Switch(config)#service password-encryption
Switch(config)#enable secret hosp 1
Switch (config)#
Switch (config)#line cons 0
Switch (config-line)#password SRS-20
Switch (config-line)#login
Switch (config-line)#login sy
Switch (config-line)#login synchronous
Switch (config-line)#end
Switch #copy running-config startup-config
```

➤ **Switch “Third floor”**

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.\
Switch(config)#service password-encryption
Switch(config)#enable secret HOSP 2
Switch (config)#
Switch (config)#line cons 0
Switch (config-line)#password srs-00
Switch (config-line)#login
Switch (config-line)#login sy
Switch (config-line)#login synchronous
Switch (config-line)#end
Switch #copy running-config startup-config
```

- **PC” Third Floor”:**

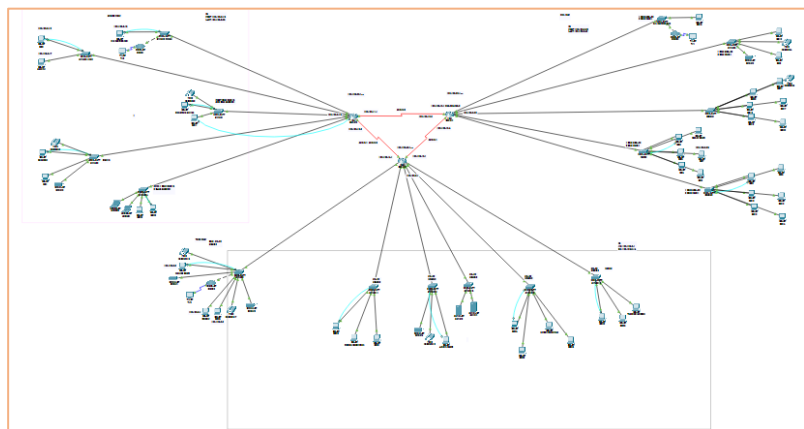
**Ipv4 Address: first 192.168.0.1    last 192.168.0.14**

- **PC” Ground Floor”:**

**Ipv4 Address: FIRST 192.168.0.15    LAST 192.168.0.25**

- **PC” First floor”:**

**Ipv4 Address: FIRST 192.168.0.26    LAST 192.168.0.46**





## ■ Configuration VIOP

```
RouterA>enable
RouterA#configure terminal
RouterA(config)#interface FastEthernet0/0
RouterA(config-if)#ip address 192.168.10.1 255.255.255.0
RouterA(config-if)#no shutdown
RouterA(config)#ip dhcp pool Phone
RouterA(dhcp-config) #network 192.168.10.0 255.255.255.0
RouterA(dhcp-config)#default-router 192.168.10.1
RouterA(dhcp-config)#option 150 ip 192.168.10.1
```