TOPOLOGY

4000 HOSTS

PC-PT
PC0

2950-24
S1LAN1

Server-PT
DNS SERVER

2950-24
S1LAN2

Server-PT
DHCP SERVER

8000 HOSTS

PC-PT
PC1

PC-PT
PC2

1841
TAIZ

WAN4

WAN1

1841
R-GW

.1

160.10.10.0/28

.2

1841
ISP

210.200.100.128/25

WWW.FCIT.COM

Server-PT
HTTP SERVER

WAN2

WAN3

WAN5

1800 HOSTS

2950-24
S2LAN1

PC-PT
PC19

3000 HOSTS

2950-24
S2LAN2

PC-PT
PC20

PC-PT
PC21

PC-PT
PC22

1841
SANA1

1841
ADEN

WAN6

1841
SANA2

WAN7

1841
HODYDA

1841
MUKALLA

2950-24
TLAN1

2950-24
TLAN2

2950-24
ALAN1

2950-24
ALAN2

2950-24
HLAN1

2950-24
HLAN2

2950-24
MLAN1

2950-24
MLAN2

Server-PT
TFTP SERVER

PC-PT
PC3

PC-PT
PC4

PC-PT
PC5

PC-PT
PC6

PC-PT
PC7

PC-PT
PC8

PC-PT
PC9

PC-PT
PC10

PC-PT
PC11

PC-PT
PC12

PC-PT
PC13

PC-PT
PC14

PC-PT
PC15

PC-PT
PC16

PC-PT
PC17

PC-PT
PC18

4000 HOSTS

2000 HOSTS

1600

850 HOSTS

1200 HOSTS

120 HOSTS

60 HOSTS

2800 HOSTS

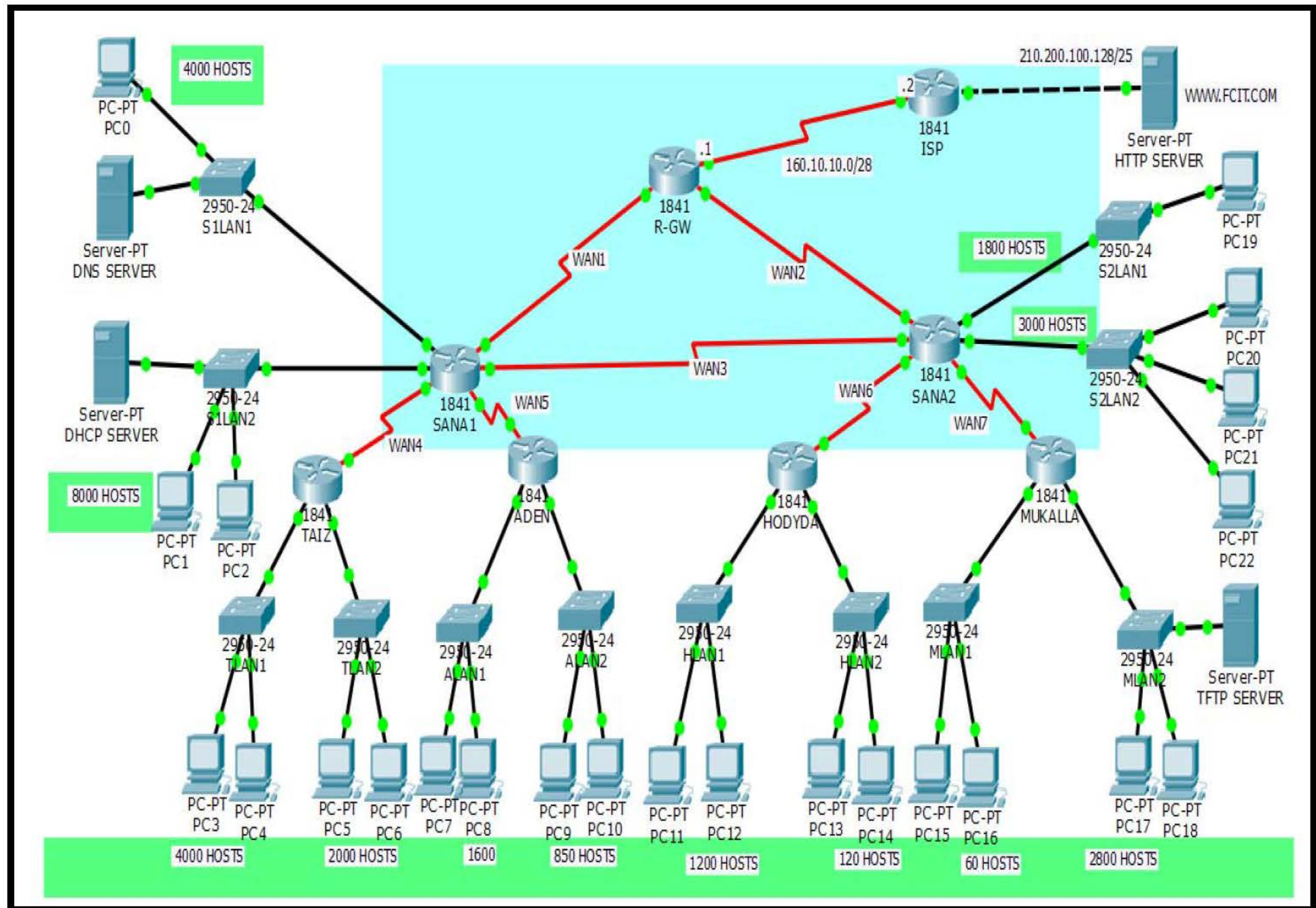# Project Requirements

**PLEASE, READ ALL OF THESE INSTRUCTIONS CAREFULLY AND ANSWER YOUR ACTIVITY.

TASK1
Step 1:
- Name all devices(Routers, Switches and servers….)as shown in the topology .
- You can choose any numbers for all interfaces on devices as you want.
- Cable all devices in topology with the proper type as shown.

Step 2:
- Configure the console, vty and enable secret passwords. Use **FCIT** for the console and vty passwords and **lab** as the enable secret in all routers.

TASK2
Step 1:
- **USE VLSM** to subnet   **X.X.X.X/16**   to meet the requirements on each LAN and WAN as follow:

	LAN 1(NO.Of Hosts)	LAN 2(NO.Of Hosts)
SANA1	4000	8000
SANA2	1800	3000
TAIZ	4000	2000
ADEN	1600	850
HODYDA	1200	120
MUKALLA	60	2800
Each WAN SHOULD have 2 Hosts		

Step2:
- According your subnetting, start to configure all devices interfaces(**Routers ,servers and PCs**)with ip address , subnet mask ,DNS and Gateway **statically**(except PCs in LAN2 on SANA1 router where you must configure DHCP server to provide these PCs with IP address. Subnet mask, Gateway and DNS server address **dynamically**).
- Configure the router interface with **first IP** address in each sub network.
- Configure the server interface with **last IP** address in each sub network.

TASK 3
Step 1:
- Configure each router in topology by **static method** with all other networks.

Step 2:
- ON **DNS server** Configure the domain name **WWW.FCIT.COM** with IP address **210.200.100.130**.

Step 3:
- ON **HTTP server** make your web page and write these statements:
  <u>**Line 1**</u> :(Congratulation…you complete PROJECT Successfully).
  <u>**Line 2**</u>(YOUR NAME AND ID).
  In the following style:
    - ✓ **Heading is Header 1.**
    - ✓ **background-color is powderblue.**
    - ✓ **font color is red, *italic* .**

TASK 4
- Verify your connectivity so you can ping all devices one from another .
  All PCs can reach HTTP server and browser **WWW.FCIT.COM** and the statements
  **(Congratulation…you complete PROJECT Successfully) and (YOUR NAME AND
  ID) should be displayed.**

TASK 5
- Save all configuration on the **TFTP server**.

TASK 6
- Fill in this table as your subnetting:

		LAN1	LAN2
SANA1	Subnet address		
	Subnet mask		
	First IP Valid host		
	Last IP Valid host		
	Broadcast address		
	Hosts Required		
	Host wasted		
		LAN1	LAN2
SANA2	Subnet address		
	Subnet mask		
	First IP Valid host		
	Last IP Valid host		
	Broadcast address		
	Hosts Required		
	Host wasted		
		LAN1	LAN2
TAIZ	Subnet address		
	Subnet mask		
	First IP Valid host		
	Last IP Valid host		
	Broadcast address		
	Hosts Required		
	Host wasted		

		LAN1	LAN2
ADEN	Subnet address		
	Subnet mask		
	First IP Valid host		
	Last IP Valid host		
	Broadcast address		
	Hosts Required		
	Host wasted		
		LAN1	LAN2
HODYDA	Subnet address		
	Subnet mask		
	First IP Valid host		
	Last IP Valid host		
	Broadcast address		
	Hosts Required		
	Host wasted		
		LAN1	LAN2
MUKALLA	Subnet address		
	Subnet mask		
	First IP Valid host		
	Last IP Valid host		
	Broadcast address		
	Hosts Required		
	Host wasted		
		WAN address	WAN subnet mask
WAN	WAN1		
	WAN2		
	WAN3		
	WAN4		
	WAN5		
	WAN6		
	WAN7		