



Universidad Tecnológica de Panamá

Centro Regional de Chiriquí

Estudios Generales de Ingeniería

Materia: DLYA

Segundo semestre

Grupo: 2EG7116

Profesor: Napoleón Ibarra

Estudiante

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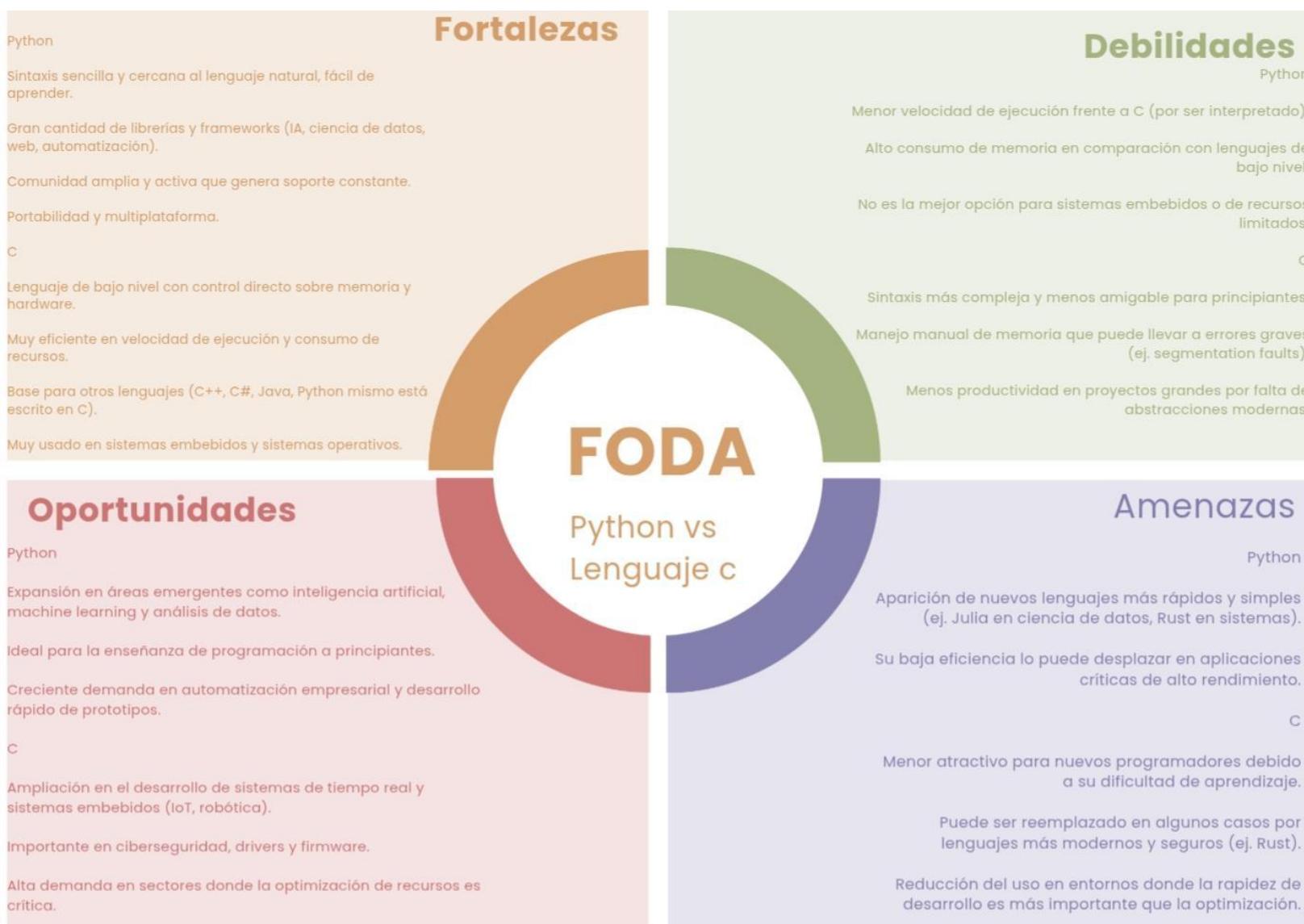
Tema:

Investigación 2

Fecha

30 de septiembre 2025

## 1. Análisis FODA sobre: lenguaje C vs Python



## Parte 2: Caso de estudio 1 (Virtualización y Servidores)

The screenshot shows the Oracle VM VirtualBox Manager interface. On the left, a list of existing virtual machines includes 'rafael' (Corriendo) and 'rick\_isaac' (Apagada). The main pane displays the configuration details for 'rafael'. Key settings shown include:

- General:** Nombre: rafael, Sistema operativo: Ubuntu (64-bit)
- Sistema:** Memoria base: 2048 MB, Procesadores: 2, Orden de arranque: Disco duro, Óptica, Disquete, Aceleración: Paginación anidada, Paravirtualización KVM
- Pantalla:** Memoria de vídeo: 16 MB, Controlador gráfico: VMSVGA, Servidor de escritorio remoto: Inhabilitado, Grabación: Inhabilitado
- Almacenamiento:** Controlador: IDE, Dispositivo IDE primario 0: [Unidad óptica] Vacío, Controlador: SATA, Puerto SATA 0: rafael.vdi (Normal, 25,00 GB)
- Audio:** Controlador de anfitrión: Predeterminado, Controlador: ICH AC97
- Red:** Adaptador 1: Intel PRO/1000 MT Desktop (Adaptador puente, «Intel(R) Wi-Fi 6 AX203»)
- USB:** Controlador USB: OHCI, EHCI, Filtros de dispositivos: 0 (0 activo)
- Carpetas compartidas:** Ninguno
- Descripción:** Ninguna

The bottom window shows a terminal session on the 'rafael' virtual machine. The output is as follows:

```
Ubuntu 25.04 rafael tty1
rafael login: rafael
Password:
Welcome to Ubuntu 25.04 (GNU/Linux 6.14.0-15-generic x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/pro

System information as of Tue Sep 30 10:32:52 PM UTC 2025

System load: 0.19      Memory usage: 13%   Processes:    116
Usage of /: 11.3% of 24.44GB  Swap usage:  0%  Users logged in: 0

0 updates can be applied immediately.

rafael@rafael:~$ _
```

The taskbar at the bottom of the screen shows various icons for system monitoring and connectivity.

```

* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/pro

System information as of Tue Sep 30 09:58:50 PM UTC 2025

System load: 0.05      Processes: 121
Usage of /: 9.9% of 29.36GB  Users logged in: 0
Memory usage: 14%      IPv4 address for enp0s3: 10.111.226.143
Swap usage: 0%         

55 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

rick_isaac@servidorutp:"$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group 0
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 brd 0.0.0.0 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 brd :: scope host ::ffff:127.0.0.1
        valid_lft forever preferred_lft forever
2: enp0s3: <NO-CARRIER,BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state DOWN group 0
    link/ether 00:00:27:f6:2a:40 brd ff:ff:ff:ff:ff:ff
    altname eno000027f62a40
    inet 10.111.226.143/24 metric 100 brd 10.111.226.255 scope global dynamic
        valid_lft 3571sec preferred_lft 3571sec
    inet6 fe80::a00:27ff:fef6:2a40/64 scope link proto kernel ll
        valid_lft forever preferred_lft forever
rick_isaac@servidorutp:"$ _"

[...]

```

Sitio local: C:\Users\rick\OneDrive\Documents\

Sitio remoto: /home/rick\_isaac

Nombre de archivo	Tamaño...	Tipo de archivo	Última modifi...	Permisos
PARCIAL 1 RICK JIM...	316 269	Documento de...	23/9/2025 16:	
PARCIAL 1.cpp	3 937	C++ Source File	16/9/2025 16:	
PARCIAL 1.exe	332 591	Aplicación	25/9/2025 11:	
PARCIAL 2.cpp	4 942	C++ Source File	16/9/2025 15:	
PARCIAL 2.exe	332 932	Aplicación	23/9/2025 15:	
PARCIAL 3.c	1 130	C Source File	16/9/2025 15:	
PARCIAL 3.exe	330 707	Aplicación	23/9/2025 16:	
PARCIAL 4.c	581	C Source File	23/9/2025 16:	
PARCIAL 4.exe	330 531	Aplicación	23/9/2025 16:	
PARCIAL 5.c	874	C Source File	16/9/2025 15:	

99 archivos y 7 directorios. Tamaño total: 36 626 912 bytes

Servidor/Archivo local	Direc...	Archivo remoto	Tamaño	Priori...	Estado

Archivos en cola Transferencias fallidas Transferencias satisfactorias

- \* Documentation: <https://help.ubuntu.com>
- \* Management: <https://landscape.canonical.com>
- \* Support: <https://ubuntu.com/pro>

System information as of Tue Sep 30 09:58:58 PM UTC 2025

System load: 0.05	Processes: 121
Usage of /: 9.9% of 29.36GB	Users logged in: 0
Memory usage: 14%	IPv4 address for enp0s3: 10.111.226.143
Swap usage: 0%	

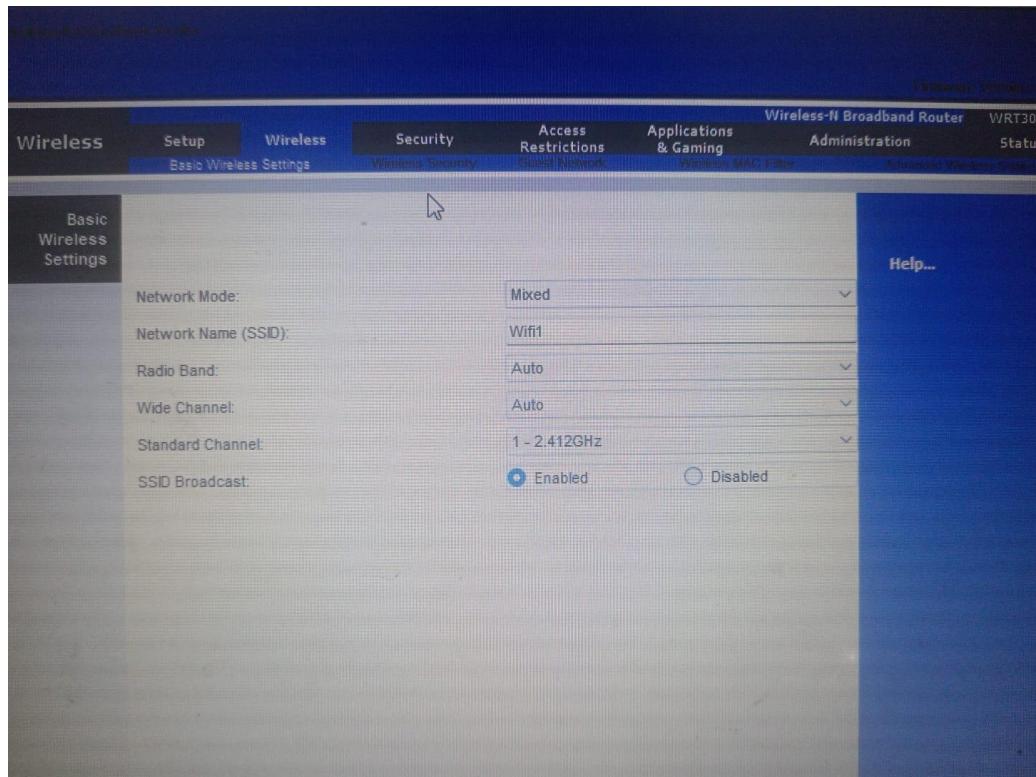
5 updates can be applied immediately.  
To see these additional updates run: apt list --upgradable

```

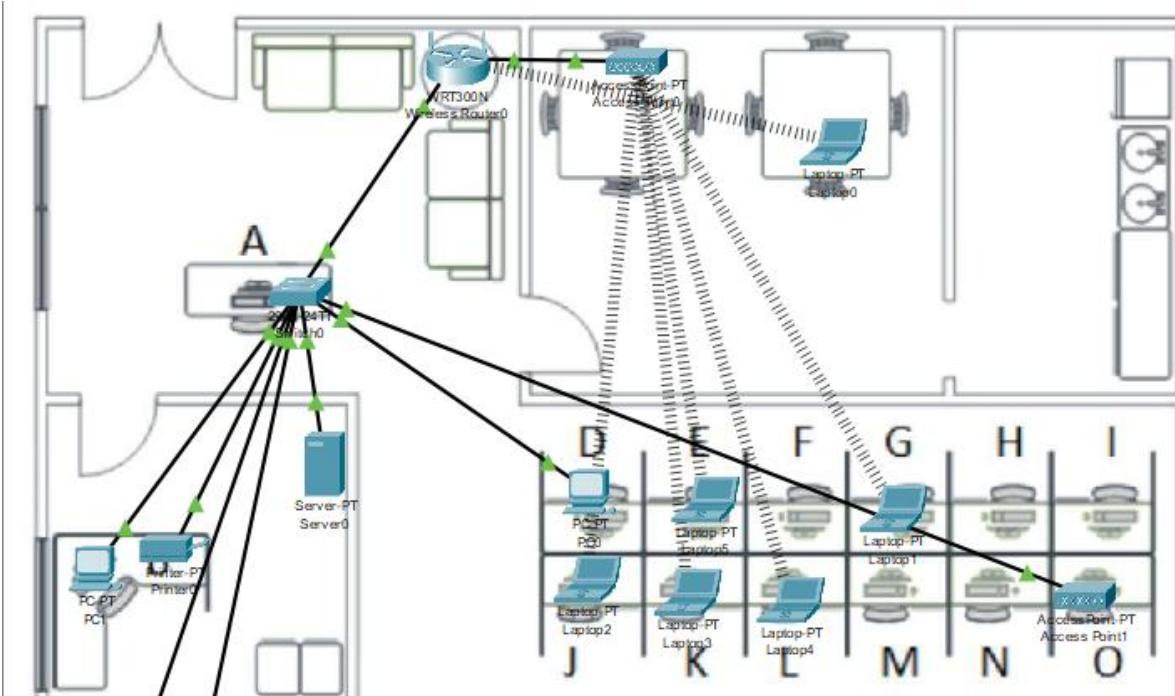
ast login: Tue Sep 30 18:46:29 2025 from 172.24.68.49
rick_isaac@servidorutp:~$ r

```

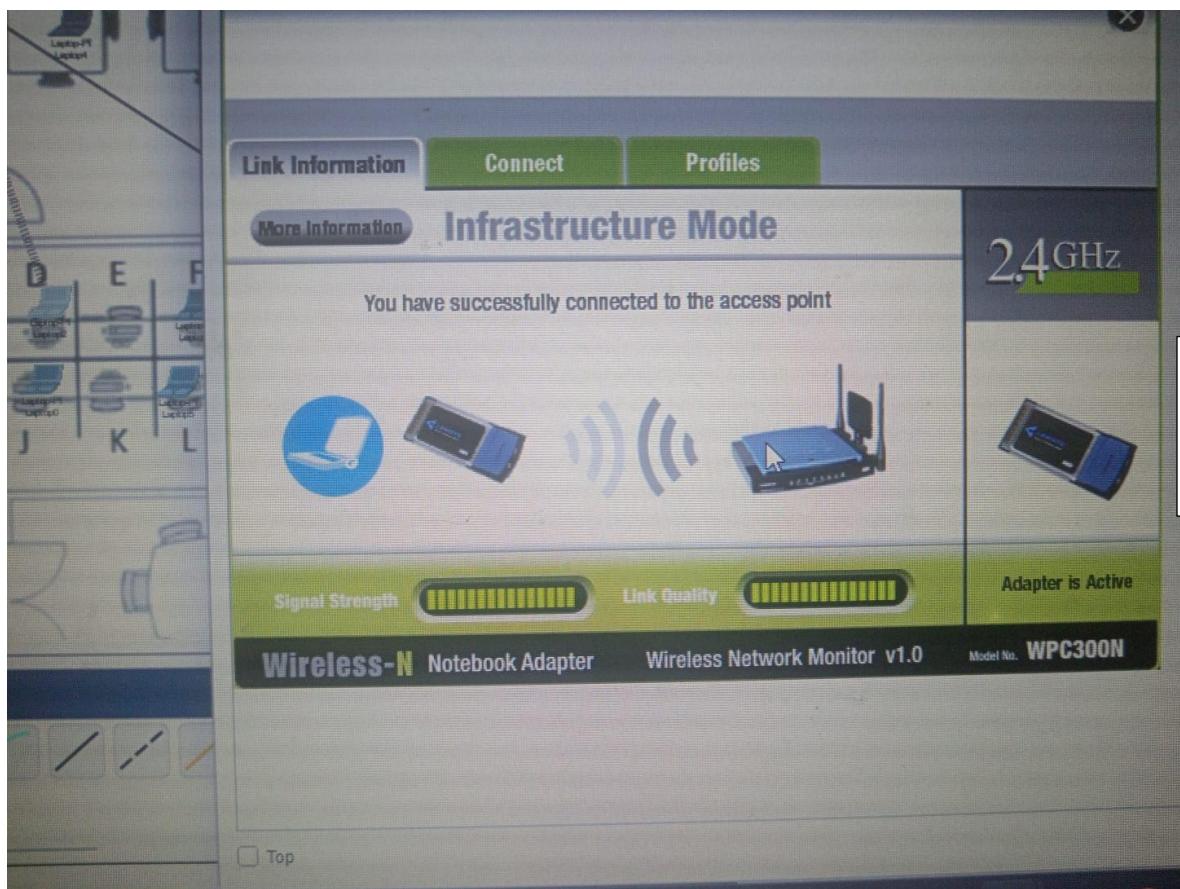
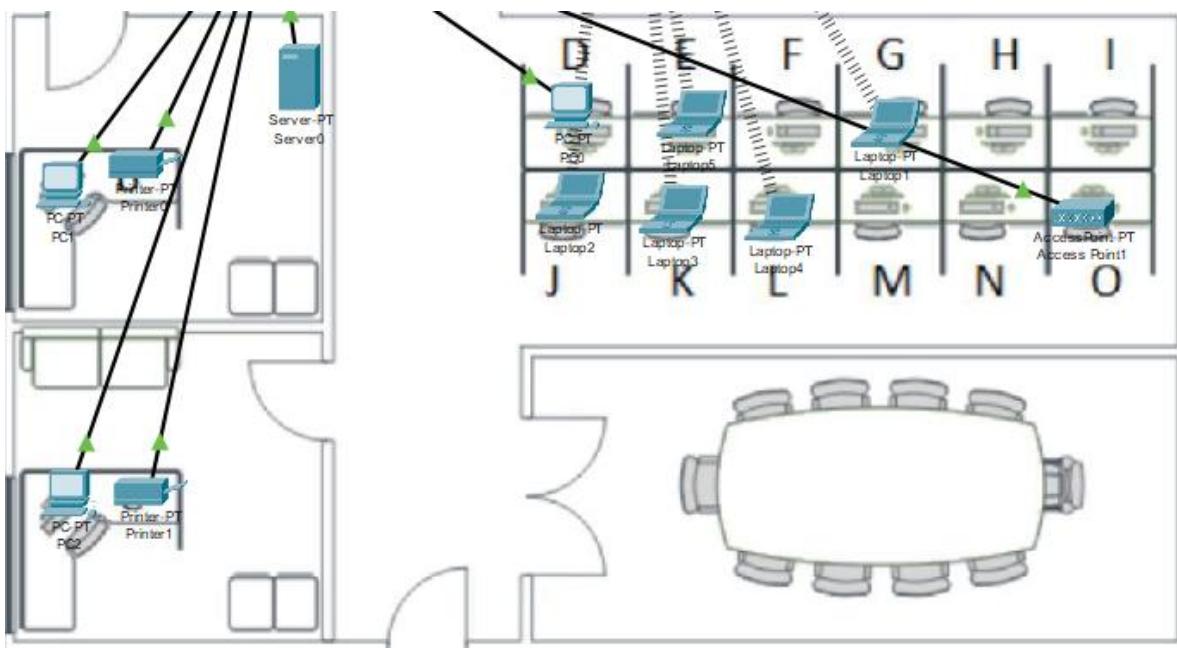
### 3 Parte: Diseño de Red Lan



Nombre del Router :  
Wifi 1



Servidor con el equipo,  
todo conectado entre  
si.



Conexión de Internet a las laptops.

Wireless Setup Wireless Security Access Restrictions Applications & Gaming Wireless-N Broadband Router WRT300N Status

Wireless Security

Security Mode: WPA2 Personal  
Encryption: AES  
Passphrase: 12345678  
Key Renewal: 3600 seconds

Help...

Internet Connection type

Optional Settings (required by some internet service providers)

Host Name: [redacted]  
Domain Name: [redacted]  
MTU: [redacted] Size: 1500

Network Setup

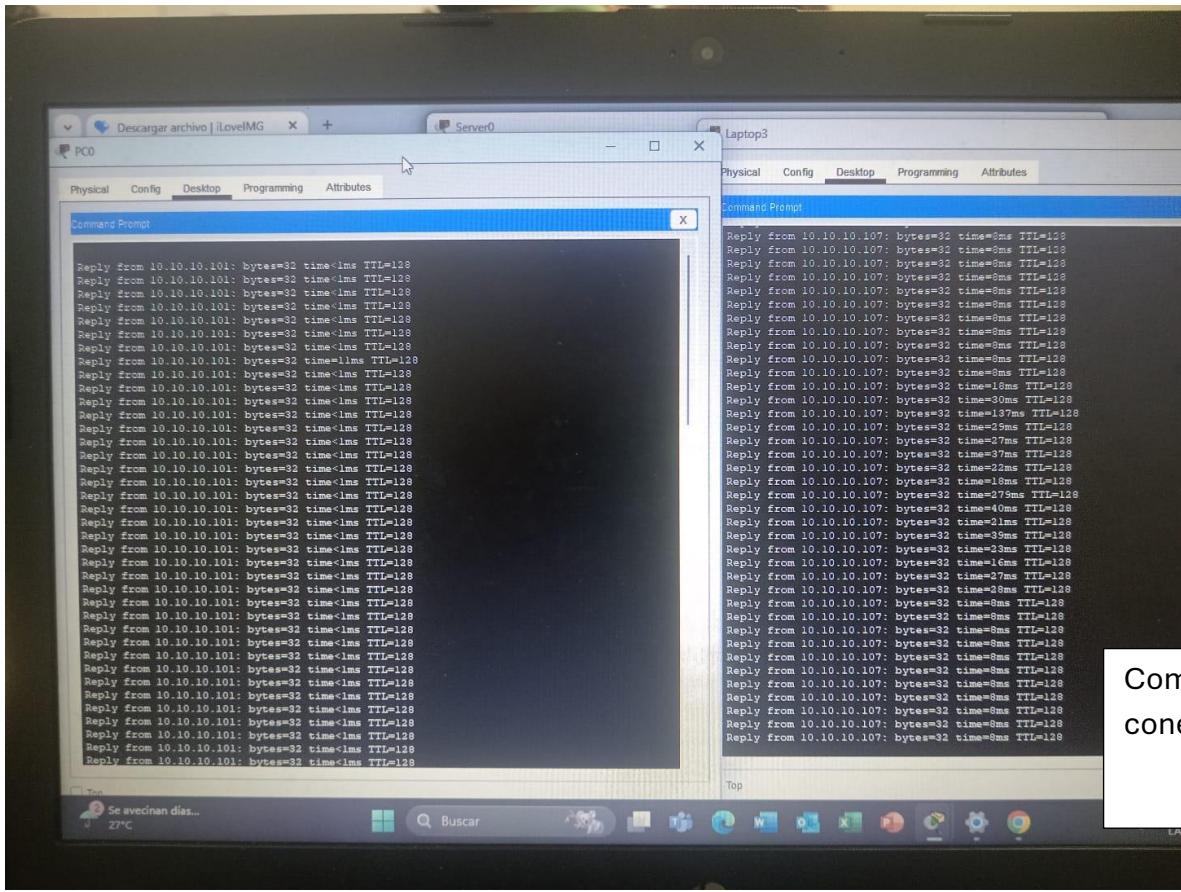
Router IP

IP Address: 10.10.10.1  
Subnet Mask: 255.255.255.0

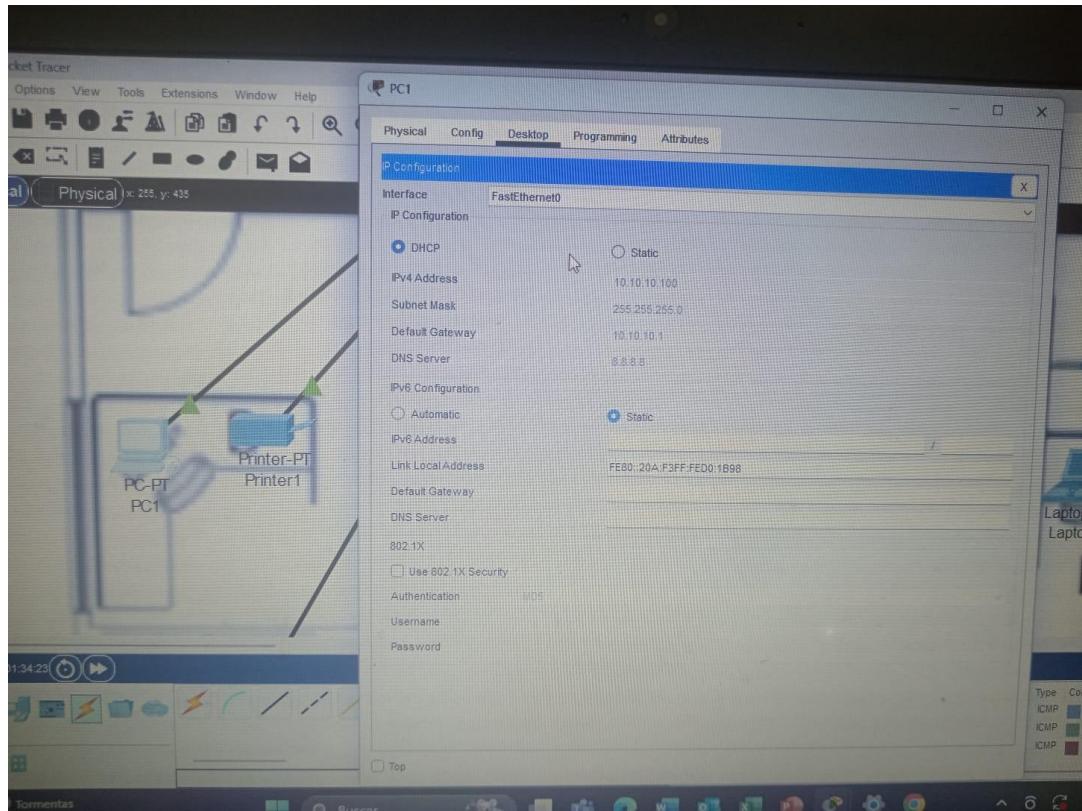
DHCP Server Settings

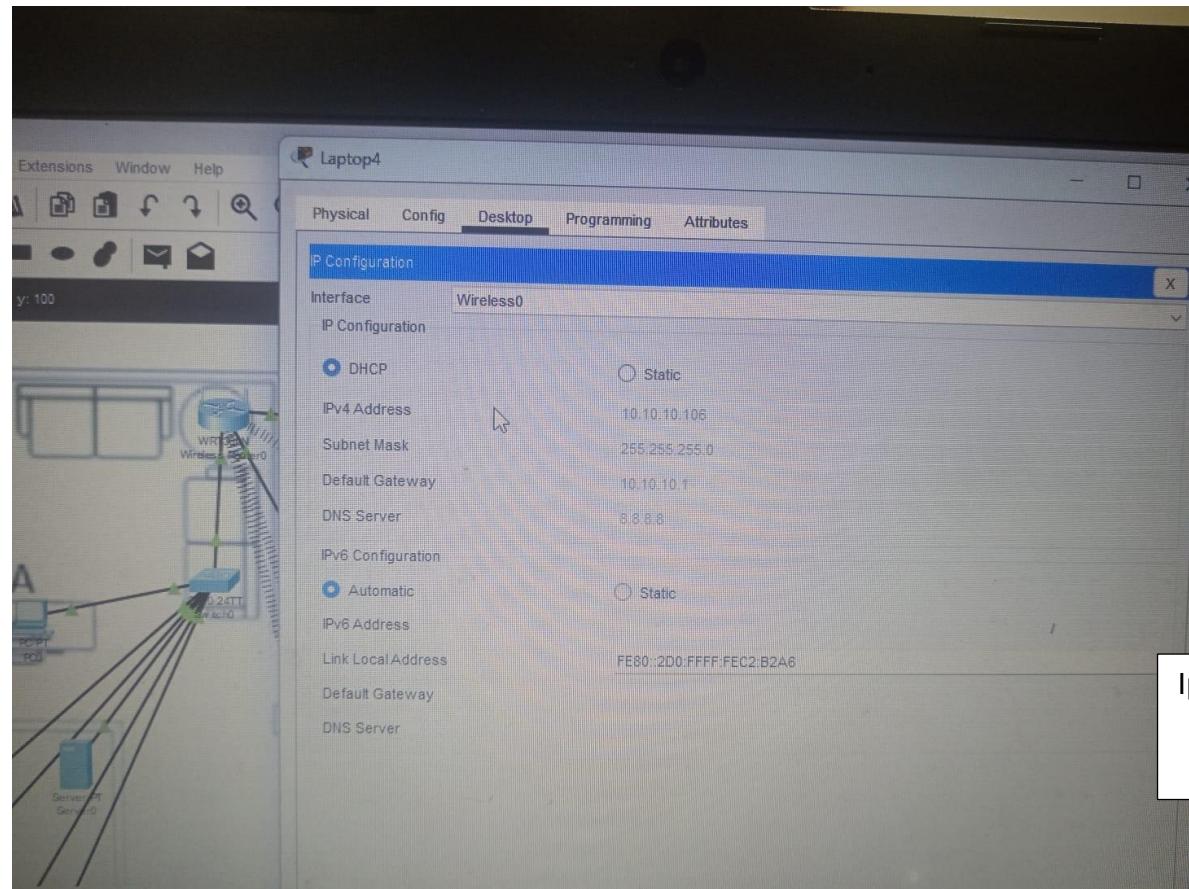
DHCP Server:  Enabled  Disabled DHCP Reservation  
Start IP Address: 10.10.10.100  
Maximum number of Users: 50  
IP Address Range: 10.10.10.100 - 149  
Client Lease Time: 0 minutes (0 means one day)  
Static DNS 1: 8.8.8.8  
Static DNS 2: 0.0.0.0  
Static DNS 3: 0.0.0.0  
WINS: 0.0.0.0

Top



Comprobación de la conexión.





Ip de la laptop