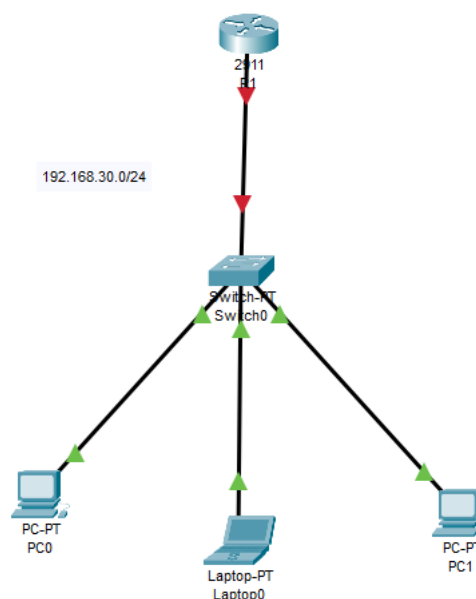# Lab 3 - Configure Local and Server-based AAA

AAA stands for Authentication, Authorisation, and Accounting, and it is the foundational security framework used to control access to network resources, especially management access to devices like routers and switches. Authentication verifies the user's identity (e.g., via username and password), ensuring only legitimate users can log in. Authorisation determines what an authenticated user can do (e.g., granting read-only access versus full configuration privileges). Accounting tracks what the user actually does, recording session details, command execution, and connection times for auditing and non-repudiation. This framework is vital because it moves beyond simple passwords, establishing a comprehensive security policy that manages who can access a critical device, what actions they can take, and provides a necessary audit trail for maintaining a secure and stable network environment.

Lab Objectives:

- Configure local AAA on a router
- Configure TACACS Server for authentication on a router
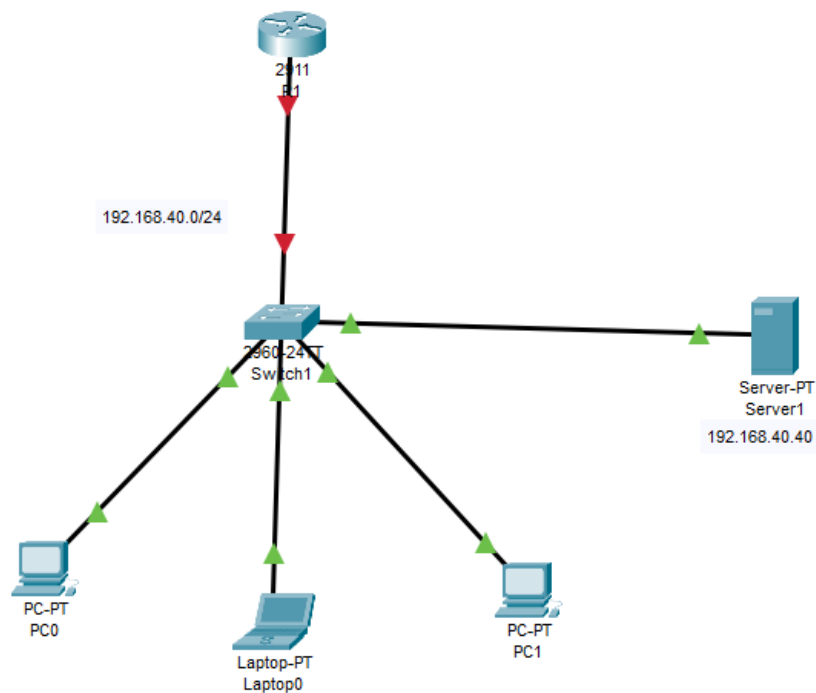- Configure the Radius Server for authentication on a router

Task 1: Configure Local AAA on a Router

Using the provided topology above, perform the following tasks:

- Create the network on the Packet Tracer.
- Add the IP address to the devices and test the connectivity.
- Configure local AAA on the router
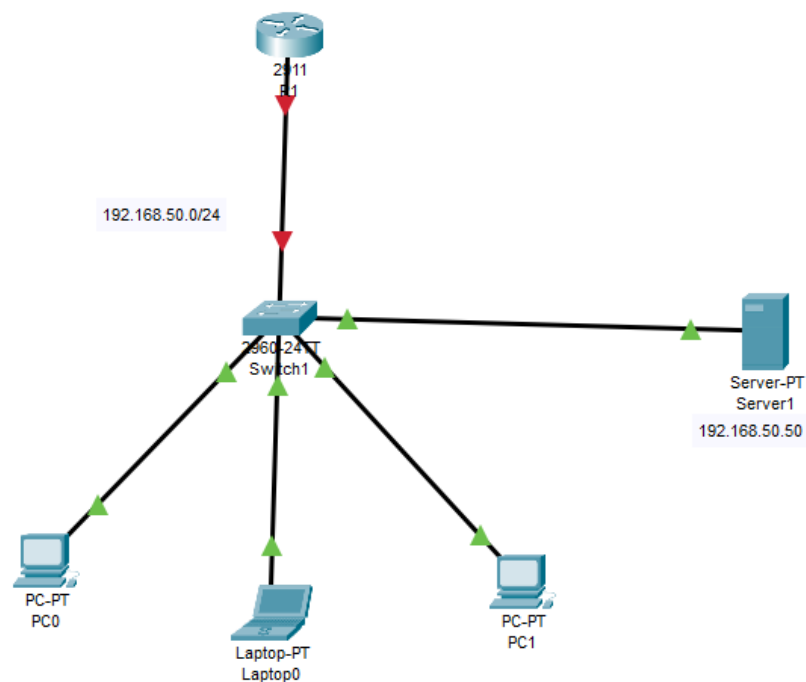- Verify and test the local AAA on console, telnet, and SSH.

Task 2: Configure Server-Based (TACACS Server)

Using the provided topology above, perform the following tasks:

- Create the network on the Packet Tracer.
- Add the IP address to the devices and test the connectivity.
- Configure the TACACS server AAA to authenticate the router.
- Verify and test the server-based AAA on console, telnet, and SSH.

Task 3: Configure Server-Based (Radius Server)

Using the provided topology above, perform the following tasks:

- Create the network on the Packet Tracer.
- Add the IP address to the devices and test the connectivity.
- Configure the Radius server AAA to authenticate the router.
- Verify and test the server-based AAA on console, telnet, and SSH.