

**University of Ain Temouchent Belhadj Bouchaib**  
**Faculty of Science and Technology**  
**Department of Mathematics and Computer Science**  
**Academic year 2025-2026**

**PW1 / Network Architecture / M1 CYSIA**

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## Objective

The purpose of this practical work is to remind you how to configure static routes on a Cisco router using the Packet Tracer network simulator.

We remind you that Packet Tracer allows simulating a network infrastructure described schematically.

There are 2 simulation modes :

- real-time (Real-time tab)
- step-by-step (Simulation tab).

The devices are inserted into the simulation area by dragging with the mouse. The configuration of these devices is accessible by double-clicking or via the CLI (Command Line Interface).

## Exercise 1

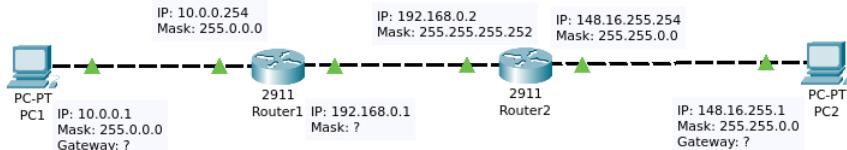


FIGURE 1 – Network topology.

1. Fill in the missing details in the given network topology.
2. Create this network topology using Packet Tracer.
3. Configure all the interfaces indicated in Figure 1. The configuration of the interfaces of routers R1 and R2 must be done using the CLI (Command Line Interface).
4. Why cannot PCs 1 and 2 ping each other ?
5. Using the simulation mode of Packet Tracer, examine the *type* and *code* fields of the ICMP messages exchanged in this case (failed ping).
6. Configure static routes on each of the routers R1 and R2 using the *ip route* command.
7. Can the two PCs ping each other now ?
8. Through the ping, can you confirm that PC1 is 2 hops away from PC2 and vice versa ?
9. In your opinion, can we use the dynamic routing protocol RIPv1 instead of static route configuration ? Explain why.

## **Remarks**

- Note that on a router, the interface located in the local network generally has either the first address of the network or the last one.