**Course Title: CN Lab**

**Course Code:CIS 211 L**

**Lab Task-2**

**Fall 2025**

| Submitted by | Submitted to |
|---|---|
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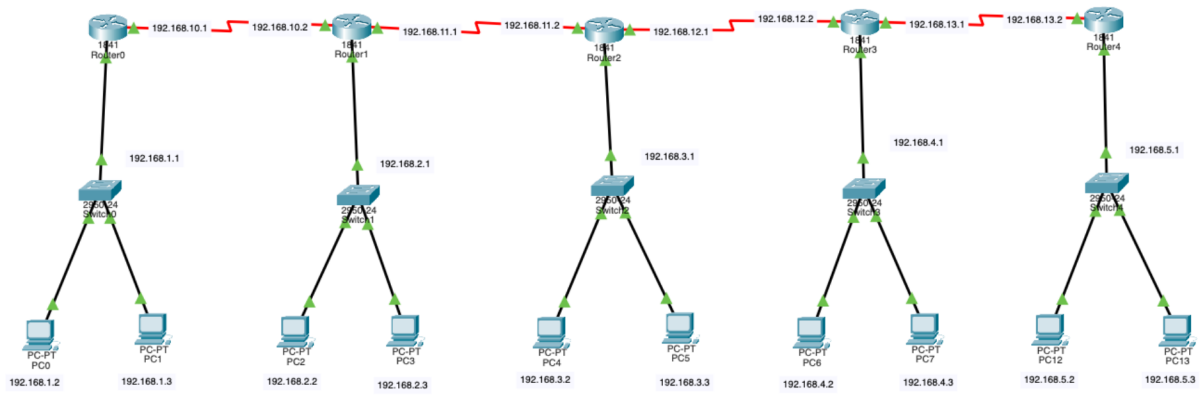
Due Date: 25-11-2025 Submission Date: 25-11-2025




The network has 5 routers, 5 switches, and 10 PCs, connected so all PCs can communicate, with routers using RIP Version 1.

## Router and Switch Configuration using CLI command

**Router 1**

en

conf t

int fa0/0

ip address 192.168.1.1 255.255.255.0

no shut

exit

**Router 2**

en

conf t

int fa0/0

ip address 192.168.2.1 255.255.255.0

no shut

exit

**Router 3**

en

conf t

int fa0/0

ip address 192.168.3.1 255.255.255.0

no shut

exit

**Router 4**

en

conf t

int fa0/0

ip address 192.168.4.1 255.255.255.0

no shut

exit

**Router 5**

en

conf t

int fa0/0

ip address 192.168.5.1 255.255.255.0

no shut

exit

## Router to Router Serial Interface Configuration using CLI command

**Router 1**

int s0/1/0

ip address 192.168.10.1 255.255.255.0

no shut

exit

**Router 2**

int s0/1/0

ip address 192.168.10.2 255.255.255.0

no shut

exit

**Router 2**

int s0/1/1

ip address 192.168.11.1 255.255.255.0

no shut

exit

**Router 3**

int s0/1/0

ip address 192.168.11.2 255.255.255.0

no shut

exit

**Router 3**

int s0/1/1

ip address 192.168.12.1 255.255.255.0

no shut

exit

**Router 4**

int s0/1/0

ip address 192.168.12.2 255.255.255.0

no shut

exit

**Router 4**

int s0/1/1

ip address 192.168.13.1 255.255.255.0

no shut

exit

**Router 5**

int s0/1/0

ip address 192.168.13.2 255.255.255.0

no shut

exit

## RIP Version 1 Configuration for All Routers using CLI command

**Router 1**

router rip

version 1

network 192.168.1.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 2**

router rip

version 1

network 192.168.2.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 3**

router rip

version 1

network 192.168.3.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 4**

router rip

version 1

network 192.168.4.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 5**

router rip

version 1

network 192.168.5.0

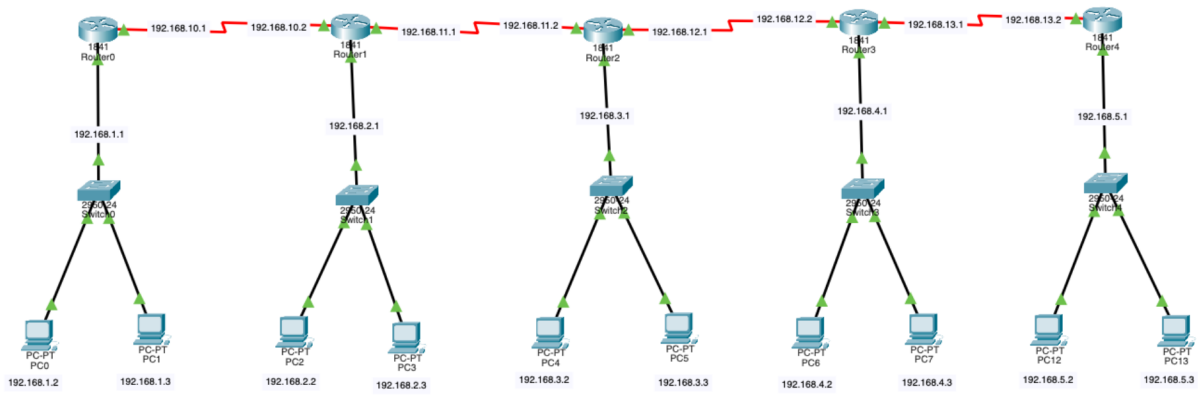
network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit




The network has 5 routers, 5 switches, and 10 PCs, connected so all PCs can communicate, with routers using RIP Version 2.

## RIP Version 2 Configuration for All Routers using CLI command

**Router 1**

router rip

version 2

no auto-summary

network 192.168.1.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 2**

router rip

version 2

no auto-summary

network 192.168.2.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 3**

router rip

version 2

no auto-summary

network 192.168.3.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 4**

router rip

version 2

no auto-summary

network 192.168.4.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

**Router 5**

router rip

version 2

no auto-summary

network 192.168.5.0

network 192.168.10.0

network 192.168.11.0

network 192.168.12.0

network 192.168.13.0

exit

# RIP

**RIP:** Routing Information Protocol is a way for routers to share information about networks. It helps routers know the best path to send data. RIP is simple and mostly used in small networks.

## Differences between RIP Version 1 and Version 2 :

| Feature | Version 1 | Version 2 |
|---|---|---|
| Type | Classful | Classless |
| Subnet Info | No subnet mask included | Sends subnet mask (supports VLSM) |
| Updates | Broadcast | Multicast |
| Security | None | Plain-text or MD5 authentication |
| Best For | Small, simple networks | Networks with subnets or security needs |