EPITECH.
L'ECOLE DE L'INNOVATION ET DE L'EXPERTISE INFORMATIQUE

Bachelor Cycle

Cisco Networking

PW #7

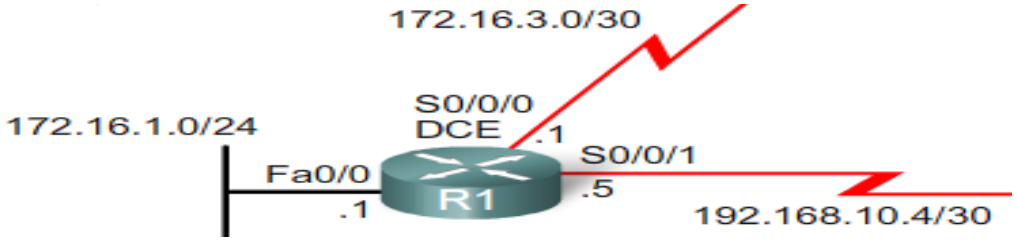
Summary

- Enhanced Interior Gateway Routing Protocol (EIGRP)
- EIGRP
  - ✧ Configuration
  - ✧ Authentication
  - ✧ Others commands
- Practical work

Enhanced Interior Gateway Routing Protocol (EIGRP)

- Distance Vector Protocol introduce by Cisco in 1992
- To improve IGRP
- Use the RTP protocol to route packets EIGRP
- Use DUAL algorithm to calculate its routes

EIGRP Configuration (1/3)




```
Lab1-ro1841-1#(config)>router eigrp 1
Lab1-ro1841-1#(config-router)#>network 172.16.1.0
Lab1-ro1841-1#(config-router)#>network 172.16.3.0 0.0.0.3
Lab1-ro1841-1#(config-router)#>network 172.16.10.4 0.0.0.3
```

EIGRP Configuration (2/3)

- By default, the « network » command with classfull network adress permit to active EIGRP on all interfaces of a router.
- The « network » command with the wildcard permit to activate EIGRP on specified interfaces.

Tips : Classfull = no wildcard – Classless = wildcard

EIGRP Configuration (3/3)

- Display all routes

```
Lab1-ro1841-1#>show ip routes
```

- **<u>Warning</u> : EIGRP routes are indicated by D, which replaces DUAL.**

EIGRP Authentication

- EIGRP provides 2 authentication modes : simple text form or MD5
- Create a key chain

```
Lab1-ro1841-1(config)#>key chain [my_chain]
Lab1-ro1841-1(config-keychain)#>key [number]
Lab1-ro1841-1(config-keychain-key)#>key–string password [my_password]
```

- Use authentication on a interface

```
Lab1-ro1841-1(config)#>interface fastEthernet 0/0
Lab1-ro1841-1(config-if)#>ip authentication key-chain eigrp [id] [my_chain]
Lab1-ro1841-1(config-if)#>ip authentication mode eigrp [id] [text | md5]
```

EIGRP Others Commands

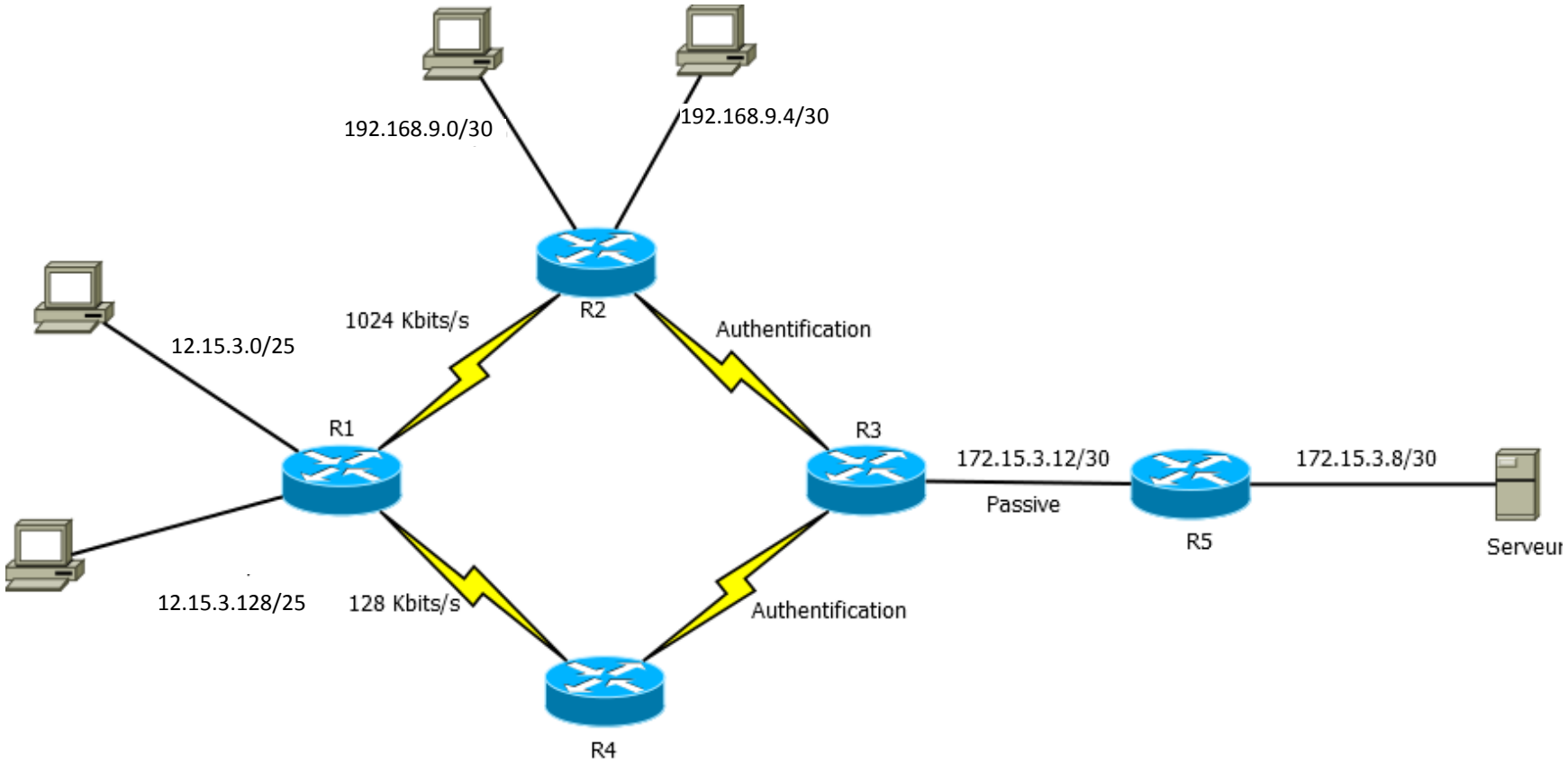
- Disable automatic route summarization

```
Lab1-ro1841-1(conf)#>router eigrp [id]
Lab1-ro1841-1(conf-router)#>no auto-summary
```

- Redistribute static route in EIGRP protocol

```
Lab1-ro1841-1(conf)#>router eigrp [id]
Lab1-ro1841-1(conf-router)#>redistribute static
```

Practical Work (1/2)



Practical Work (2/2)

- You must use EIGRP protocol on your routers
- You must use the class C : 192.168.0.0/24 between your routers R1, R2, R3 & R4
- R5 must be connected to R3 and a PC to serve as a web server
- Implement an md5 authentication between R3 & R4 and R2 & R3
- Configure a static route on R3 to route traffic on the network 172.15.3.0/24