

BÁO CÁO THỰC HÀNH

Môn học: Thiết bị mạng & Truyền thông đa phương tiện

Bài Lab: 01

Tên chủ đề: Cấu hình thiết bị mạng Cisco

GVHD: Nguyễn Phước Bảo Long

Ngày báo cáo: 12/04/2024

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2. NỘI DUNG THỰC HIỆN:¹

STT	Công việc	Kết quả tự đánh giá
1	Yêu cầu 01 – Làm quen và tìm hiểu thiết bị mạng Cisco tại Phòng thực hành	100%
2	Yêu cầu 02 – Thực hành các lệnh cấu hình cơ bản trên thiết bị Cisco	100%

Phần bên dưới của báo cáo này là tài liệu báo cáo chi tiết thực hiện.

¹ Ghi nội dung công việc, các kịch bản trong bài Thực hành

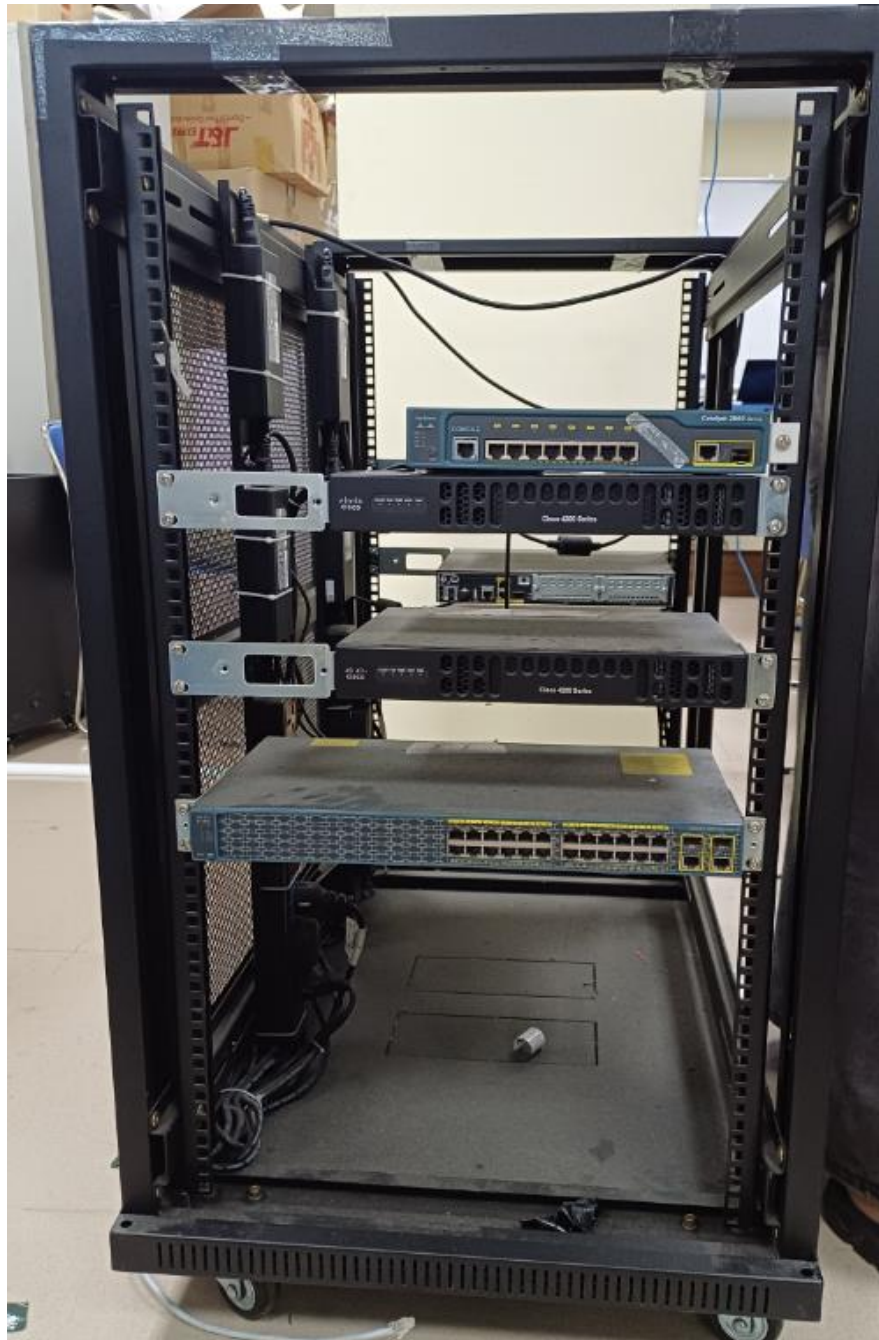
BÁO CÁO CHI TIẾT

Yêu cầu 01 – Làm quen và tìm hiểu thiết bị mạng Cisco tại Phòng thực hành

Nội dung 1: Nhận dạng, xác định loại thiết bị, tên thiết bị, số lượng mỗi thiết bị

Nhóm em được nhận tủ Rack số 2. Các thiết bị có trong tủ bao gồm:

- 2 switch Cisco Catalyst 2960 Series
- 4 router Cisco 4200 Series
- 1 router Cisco 1900 Series
- 2 switch Cisco Catalyst 2960 Plus Series



Hình 1. Mặt bên phải của tủ Rack



Hình 2. Mặt bên trái của tủ Rack

Nội dung 2: Tìm hiểu thiết bị Router được trang bị trong tủ Rack. Dung lượng Memory, Flash Memory, nhận dạng, xác định vị trí các cổng (interface) và chức năng của từng cổng.

- Thiết bị Router được trang bị trong tủ Rack: **Router Cisco 4200 Series**



Hình 3. Mặt trước của Router



Hình 4. Mặt sau của Router

- Dung lượng Memory: **4 GB**
- Flash Memory: **8 GB**
- Xác định vị trí từng cổng (interface):



Hình 5. Vị trí các cổng (interface) của Router

Yêu cầu 02 – Thực hành các lệnh cấu hình cơ bản trên thiết bị Cisco**Bước 1:** Xóa cấu hình startup

- Trên R1:

```
R1#
R1#erase startup-config
*****
*****
Erasing Nvram will not clear license trust code.
*****
*****
Erasing the nvram filesystem will remove all configuration files! Continue? [confirm]
[OK]
Erase of nvram: complete
R1#
```

- Trên R2:

```
R2#erase startup-config
*****
*****
Erasing Nvram will not clear license trust code.
*****
*****
Erasing the nvram filesystem will remove all configuration files! Continue? [confirm]
[OK]
Erase of nvram: complete
R2#
*Mar 28 09:24:00.995: %SYS-7-NV_BLOCK_INIT: Initialized the geometry of nvram
R2#
```

- Trên R3:

```
R3#erase startup-config
*****
*****
Erasing Nvram will not clear license trust code.
*****
*****
Erasing the nvram filesystem will remove all configuration files! Continue? [confirm]
[OK]
Erase of nvram: complete
R3#
R3#
R3#
*Mar 28 09:34:22.847: %SYS-7-NV_BLOCK_INIT: Initialized the geometry of nvram
```

Bước 2: Đặt encrypt enable password: cisco

- Trên R1:

```
R1(config)#enable secret cisco
```

- Trên R2:

```
R2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#enable secret cisco
```

- Trên R3:

```
R3#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R3(config)#enable secret cisco
```

Bước 3: Bật dịch vụ telnet, password login là tên nhóm

- Trên R1:

```
R1(config)#line vty 0 4
R1(config-line)#password nhom03
R1(config-line)#login
```

- Trên R2:

```
R2(config)#line vty 0 4
R2(config-line)#password nhom03
R2(config-line)#login
```

- Trên R3:

```
R3(config)#line vty 0 4
R3(config-line)#password nhom03
R3(config-line)#login
```

Bước 4: Đặt IP cho interface sẽ dùng để kết nối với máy tính cấu hình qua telnet

- Trên R1:

```
R1(config)#
R1(config)#interface g0/0/0
R1(config-if)#ip address 192.168.128.1 255.255.255.0
R1(config-if)#no shutdown
R1(config-if)#
```

- Trên R2:

```
R2(config)#interface g0/0/0
R2(config-if)#ip address 192.168.128.2 255.255.255.0
R2(config-if)#no shutdown
R2(config-if)#
```

- Trên R3:

```
R3(config)#interface g0/0/0
R3(config-if)#ip address 192.168.128.3 255.255.255.0
R3(config-if)#no shutdown
R3(config-if)#
```

Bước 5: Hiển thị OS version

- Trên R1:

```
COM7 - PuTTY
R1#show version
Cisco IOS XE Software, Version 17.04.01a
Cisco IOS Software [Bengaluru], ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9_IAS-M), Version 17.4.1a, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
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Compiled Fri 18-Dec-20 05:04 by mcpre

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ROM: 16.12(2r)

R1 uptime is 20 minutes
Uptime for this control processor is 23 minutes
System returned to ROM by Reload Command
System image file is "bootflash:isr4200-universalk9_ias.17.04.01a.SPA.bin"
Last reload reason: Reload Command

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--More--
```

- Trên R2:


```
COM7 - PuTTY
R2#show version
Cisco IOS XE Software, Version 17.04.01a
Cisco IOS Software [Bengaluru], ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9_IAS-M), Version 17.4.1a, RELEASE SOFTWARE (fc4)
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ROM: 16.12(2r)

R2 uptime is 36 minutes
Uptime for this control processor is 39 minutes
System returned to ROM by Reload Command
System image file is "bootflash:isr4200-universalk9_ias.17.04.01a.SPA.bin"
Last reload reason: Reload Command

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If you require further assistance please contact us by sending email to
export@cisco.com.

--More--
```

- Trên R3:


```
COM7 - PuTTY
R3#show version
Cisco IOS XE Software, Version 17.04.01a
Cisco IOS Software [Bengaluru], ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9_IAS-M), Version 17.4.1a, RELEASE SOFTWARE (fc4)
Technical Support: http://www.cisco.com/techsupport
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ROM: 16.12(2r)

R3 uptime is 44 minutes
Uptime for this control processor is 47 minutes
System returned to ROM by Reload Command
System image file is "bootflash:isr4200-universalk9_ias.17.04.01a.SPA.bin"
Last reload reason: Reload Command

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http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

--More--
```

Bước 6: Đặt hostname cho các Router lần lượt là R1, R2 và R3

- Trên R1:

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R1
R1(config)#
```

- Trên R2:

```
Router(config)#
Router(config)#hostname R2
R2(config)#exit
R2#
*Mar 28 09:23:40.854: %SYS-5-CONFIG I: Configured from console by console
```

- Trên R3:

```
Router(config)#
Router(config)#hostname R3
R3(config)#exit
R3#
*Mar 28 09:33:44.372: %SYS-5-CONFIG_I: Configured from console by console
```

Bước 7: Đặt banner motd cho các Router với nội dung: “Hello world! We are from UIT”

- Trên R1:

```
R1(config)#banner motd # Hello world! We are from UIT #
R1(config)#end
R1#
*Mar 28 08:24:18.175: %SYS-5-CONFIG_I: Configured from console by console
```

+ Kết quả trên R1:

```
Hello world! We are from UIT
R1>
```

- Trên R2:

```
R2(config)#
R2(config)#banner motd # Hello world! We are from UIT #
R2(config)#end
```

+ Kết quả trên R2:

```
Hello world! We are from UIT
R2>
```

- Trên R3:

```
R3(config)#
R3(config)#banner motd # Hello world! We are from UIT #
R3(config)#end
```

+ Kết quả trên R3:

```
Hello world! We are from UIT
R3>
```

Bước 8: Copy running-config vào startup-config

- Trên R1:

```
R1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R1#
*Mar 28 08:29:59.359: %SYS-6-PRIVCFG_ENCRYPT_SUCCESS: Successfully encrypted private config file
```

- Trên R2:

```
R2#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R2#
*Mar 28 08:19:23.038: %SYS-6-PRIVCFG_ENCRYPT_SUCCESS: Successfully encrypted private config f
ile
```

- Trên R3:

```
R3#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R3#
*Mar 28 08:34:28.315: %SYS-6-PRIVCFG_ENCRYPT_SUCCESS: Successfully encrypted private config f
ile
```

HẾT