

## **CMPE 305 Data and Digital Communication**

### **MP3 – Basic Switch and OSI Model**

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BSCPE 3-3

09/28/2025

## **2.9.1 Basic Switch and End Device Configuration**

<b>Objectives</b>	<b>Scenario</b>
<ul style="list-style-type: none"><li>• Configure hostnames and IP addresses on two Cisco Internetwork Operating System (IOS) switches using the command-line interface (CLI).</li><li>• Use Cisco IOS commands to specify or limit access to the device configurations.</li><li>• Use IOS commands to save the running configuration.</li><li>• Configure two host devices with IP addresses.</li><li>• Verify connectivity between the two PC end devices.</li></ul>	<p>As a recently hired LAN technician, your network manager has asked you to demonstrate your ability to configure a small LAN. Your tasks include configuring initial settings on two switches using the Cisco IOS and configuring IP address parameters on host devices to provide end-to-end connectivity. You are to use two switches and two hosts/PCs on a cabled and powered network.</p>

### **Instructions**

Configure the devices to fulfill the requirements below.

### **Requirements**

- Use a console connection to access each switch.

- Name Room-145 and Room-146 switches.
- Use the xAw6k password for all lines.
- Use the 6EBUp secret password.
- Encrypt all clear text passwords.
- Configure an appropriate message-of-the-day (MOTD) banner.
- Configure addressing for all devices according to the Addressing Table.
- Save your configurations.
- Verify connectivity between all devices.

Note: Click Check Results to see your progress. Click Reset Activity to generate a new set of requirements. If you click on this before you complete the activity, all configurations will be lost.

ID: 1200

## Source Codes & Output SS

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ID: 1221

Time Elapsed: 00:43:13      Completion: 81%  
 Dock    **Check Results**    Back    1/1    Next

Time: 00:47:21

**Terminal Output (Room-145):**

```
login
!
!
!
!
end

Room-145#
Room-145#
Room-145#config t
Enter configuration commands, one per line. End with CNTL/Z.
Room-145(config)#interface vlan 1
Room-145(config-if)#ip add 10.10.10.100 255.255.255.0
Room-145(config-if)#no sh

Room-145(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

Room-145(config-if)#exit
Room-145(config)#ex
Room-145#
%SYS-5-CONFIG_I: Configured from console by console

Room-145#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Room-145#exit
```

Cisco Packet Tracer - C:\Users\Myline\Downloads\2.9.1-Packet-Tracer-Basic-Switch-and-End-Device-Configuration (1).pka - Guest - 2025-09-28 10:56:23

File Edit Options View Tools Extensions Window Help

Logical Physical x: 174, y: 152

- Configure two host devices with IP addresses.
- Verify connectivity between the two PC end devices.

**Scenario**

As a recently hired LAN technician, your network manager has asked you to demonstrate your ability to configure a small LAN. Your tasks include configuring initial settings on two switches using the Cisco IOS and configuring IP address parameters on host devices to provide end-to-end connectivity. You are to use two switches and two hosts/PCs on a cabled and powered network.

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ID: 1221

Time Elapsed: 00:43:35 Completion: 81%\*

✓ Dock Check Results Back 1/1 Next

Time: 00:47:43

Console

Toggle PDU List Window

Reception

Physical Config Desktop Programming

Terminal

```
line con 0
password 7 0839cD$95F12
login
!
line vty 0 4
login
line vty 5 15
login
!
!
!
end

Room-145#
Room-146#
Room-146#
Room-146#
Room-146#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Room-146#
Room-146#show start
Using 1222 bytes

Version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
service password-encryption

hostname Room-146
```

Simulation

Periodic Num Edit

Cisco Packet Tracer - C:\Users\Myline\Downloads\2.9.1-Packet-Tracer-Basic-Switch-and-End-Device-Configuration (1).pka - Guest - 2025-09-28 10:56:23

File Edit Options View Tools Extensions Window Help

Logical Physical x: 117, y: 226

- Configure two host devices with IP addresses.
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ID: 1221

Time Elapsed: 00:43:52 Completion: 81%\*

✓ Dock Check Results Back 1/1 Next

Time: 00:48:00

Console

Scenario 0

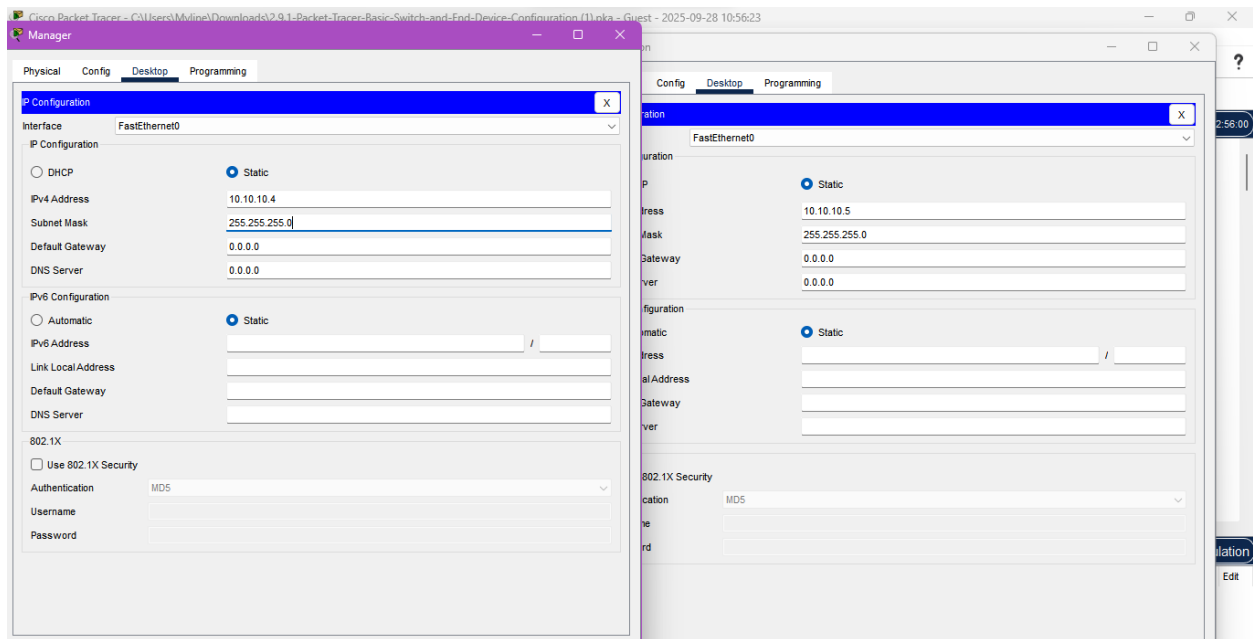
New Delete

Toggle PDU List Window

Realtime Simulation

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit

```
graph LR
    Manager --- Room-145
    Room-145 --- Room-146
    Room-146 --- Reception
```



**COMPLETION:**

Cisco Packet Tracer - C:\Users\Myline\Documents\2.9.1\DELIMA\_MP3\_100\_09-28-2025.pka - Guest - 2025-09-28 1...

File Edit Options View Tools Extensions Window Help

Activity Results Time Elapsed: 01:09:05

You did not complete the activity. There are connectivity tests that failed. Please close this window and try again.

Overall Feedback **Assessment Items** Connectivity Tests

Expand/Collapse All Show Incorrect Items

Assessment Items	Status	Points
[-] Network		
[-] Manager		
[-] Ports		
[-] FastEthernet0		
IP Address	Correct	8
Subnet Mask	Correct	8
[-] Reception		
[-] Ports		
[-] FastEthernet0		
IP Address	Correct	8
Subnet Mask	Correct	8
[-] Room-145		
Banner MOTD	Correct	2
[-] Console Line		
Password	Correct	1
Enable Secret	Correct	2
Host Name	Correct	1
[-] Ports		
[-] Vlan1		
IP Address	Correct	7
Port Status	Correct	5
Subnet Mask	Correct	7
Service Password Encryption	Correct	1
Startup Config	Correct	2
[-] Room-146		
Banner MOTD	Correct	2
[-] Console Line		
Password	Correct	1
Enable Secret	Correct	2

Score : 96/98

Item Count : 27/32

Component	Items/Total	Score
Basic Security Configuration	8/8	12/12
Configuration Management	2/2	4/4
Hostname Configuration	2/2	2/2
IPv4 Host Address Configuration	10/10	70/70
<b>Connectivity</b>		
Connectivity Tests	5/6	8/10

Close

Logical Physical

Packet Tracer - Basic Switch and End Device Configuration

Addressing Table

Device	Interface	IP Address	Subnet Mask
Room-145	VLAN 1	10.10.10.100	255.255.255.0
Room-146	VLAN 1	10.10.10.150	255.255.255.0
Manager	NIC	10.10.10.4	255.255.255.0
Reception	NIC	10.10.10.5	255.255.255.0

Objectives

- Configure hostnames and IP addresses on two Cisco Internetwork Operating System (IOS) switches using the command-line interface (CLI).
- Use Cisco IOS commands to specify or limit access to the device configurations.
- Use IOS commands to save the running configuration.
- Configure two host devices with IP addresses.
- Verify connectivity between the two PC end devices.

Time Elapsed: 01:09:20 Completion: 100%\*

Back 1/1 Next

