

Data and Digital Communications

PTACT2

Delima, Sheena Mae D.

BSCPE 3-3

Output Screenshots:

The screenshot displays the Cisco Packet Tracer interface for a network configuration. The top menu bar includes File, Edit, Options, View, Tools, Extensions, Window, and Help. The main window is divided into three sections: Logical, Physical, and a Command Line Interface (CLI).

Addressing Table:

DEVICE	INTERFACE	IP ADDRESS	SUBNET MASK	DEFAULT GATEWAY
ISP	Se0/0	Last Usable		N/A
	Fa0/0	205.205.205.1	255.255.255.0	N/A
HQ	Se0/0	1st Usable		N/A
	Se0/1	1st Usable		N/A
	Se0/2	1st Usable		N/A
	Se0/3	1st Usable		N/A
	Fa0/0	1st Usable		N/A
R1	Se0/0	Last Usable		N/A
	Fa0/0	1st Usable		N/A
	Fa0/1	1st Usable		N/A
	Fa1/0	1st Usable		N/A
	Fa1/1	1st Usable		N/A
R2	Se0/0	Last Usable		N/A
	Fa0/0	1st Usable		N/A
	Fa0/1	1st Usable		N/A
	Fa1/0	1st Usable		N/A
	Fa1/1	1st Usable		N/A

The network diagram shows a central router (R1) connected to two other routers (R2 and R3). R1 is connected to R2 via its Fa0/0 interface and R2's Fa0/0 interface. R1 is also connected to R3 via its Fa0/1 interface and R3's Fa0/0 interface. R2 is connected to R3 via its Fa1/0 interface and R3's Fa1/0 interface. The diagram also shows various other devices like switches and servers connected to the routers.

The bottom status bar shows the time as 00:07:44, the temperature as 28°C, and the date as 10/11/2025.

Cisco Packet Tracer - C:\Users\Myline\Downloads\PTACT2_CISCO1 (1).pka - Guest - 2025-11-10 17:53:28

File Edit Options View Tools Extensions Window Help

Activity Results Time Left: 01:16:31

Congratulations Guest! You completed the activity.

Overall Feedback **Assessment Items** Connectivity Tests

Expand/Collapse All Show Incorrect Items

Assessment Items	Status	Points	Component(s)	Feedback
Network				
ADMIN				
Default Gateway	Correct	1	Ip	
DNS Server IP	Correct	1	Ip	
Ports				
FastEthernet0				
IP Address	Correct	1	Ip	
Subnet Mask	Correct	1	Ip	
AMA				
Default Gateway	Correct	1	Ip	
Ports				
FastEthernet0				
IP Address	Correct	1	Ip	
Subnet Mask	Correct	1	Ip	
DHCP/TFTP				
Default Gateway	Correct	1	Ip	
Ports				
FastEthernet0				
IP Address	Correct	1	Ip	
Subnet Mask	Correct	1	Ip	
TFTP Server			Other	
ServerFiles		0	Ip	
HQ	Correct	1	Ip	
DNS				
Default Gateway	Correct	1	Ip	
DNS Server				
Resource Records				
www.ama.com		1	Ip	
A Records		0	Ip	
Address	Correct	1	Ip	

Score : 149/149
Item Count : 149/149

Component	Items/Total	Score
Ip	96/96	96/96
Other	32/32	32/32
Physical	14/14	14/14
Routing	7/7	7/7

Close

28°C Mostly cloudy Search ENG US 11:51 pm 10/11/2025

Source Codes:

==== TASK 1 ====

Connect the wires

==== TASK 2 ====

| CONFIGURE IN ROUTER1 |

a. R1A_LAN → SN2 → 10.16.0.0/13

en

config t

int fa0/0

ip add 10.16.0.1 255.248.0.0

no sh

b. R1B_LAN → SN6 → 10.48.0.0/13

int fa0/1

```
ip add 10.48.0.1 255.248.0.0
no sh
```

```
c. R1C_LAN → SN11 → 10.88.0.0/13
int fa1/0
ip add 10.88.0.1 255.248.0.0
no sh
```

```
d. R1D_LAN → SN19 → 10.152.0.0/13
int fa1/1
ip add 10.152.0.1 255.248.0.0
no sh
```

```
e. R1 > HQ 192.168.0.64 /27
int s0/0
ip add 192.168.0.94 255.255.255.224
no sh
do wr
```

| CONFIGURE IN ROUTER2 |

```
a. R2A_LAN → SN1 → 172.16.16.0/20
en
config t
int fa0/0
ip add 172.16.16.1 255.255.240.0
no sh
```

```
b. R2B_LAN → SN4 → 172.16.64.0/20
int fa0/1
ip add 172.16.64.1 255.255.240.0
```

```
no sh
```

```
c. R2C_LAN → SN8 → 172.16.128.0/20
```

```
int fa1/0
```

```
ip add 172.16.128.1 255.255.240.0
```

```
no sh
```

```
d. R2D_LAN → SN12 → 172.16.192.0/20
```

```
int fa1/1
```

```
ip add 172.16.192.1 255.255.240.0
```

```
no sh
```

```
e. R2 > HQ 192.168.0.96 /27
```

```
int s0/0
```

```
ip add 192.168.0.126 255.255.255.224
```

```
no sh
```

```
do wr
```

```
| CONFIGURE IN ROUTER3 |
```

```
a. R3A_LAN → SN0 → 192.168.1.0/26
```

```
en
```

```
config t
```

```
int fa0/0
```

```
ip add 192.168.1.1 255.255.255.192
```

```
no sh
```

```
b. R3B_LAN → SN1 → 192.168.1.64/26
```

```
int fa0/1
```

```
ip add 192.168.1.65 255.255.255.192
```

```
no sh
```

```
c. R3C_LAN → SN2 → 192.168.1.128/26
int fa1/0
ip add 192.168.1.129 255.255.255.192
no sh
```

```
d. R3D_LAN → SN3 → 192.168.1.192/26
int fa1/1
ip add 192.168.1.193 255.255.255.192
no sh
```

```
e. R3 > HQ 192.168.0.128 /26
int s0/0
ip add 192.168.0.158 255.255.255.224
no sh
do wr
```

| CONFIGURE IN HQ ROUTER |

```
a. HQ to ISP → SN1 → 192.168.0.32/27
en
config t
int s0/0
ip add 192.168.0.33 255.255.255.224
no sh
```

```
b. HQ to R1 → SN2 → 192.168.0.64/27
int s0/1
ip add 192.168.0.65 255.255.255.224
no sh
```

```
c. HQ to R2 → SN3 → 192.168.0.96/27
```

```
int s0/2
ip add 192.168.0.97 255.255.255.224
no sh
```

```
d. HQ to R3 → SN4 → 192.168.0.128/27
int s0/3
ip add 192.168.0.129 255.255.255.224
no sh
```

```
e. HQ_LAN → SN6 → 192.168.0.192/27
int fa0/0
ip add 192.168.0.193 255.255.255.224
no sh
do wr
```

```
a. ISP > HQ 192.168.0.32 /24
en
config t
int s0/0
ip add 192.168.0.62 255.255.255.224
no sh
```

```
b. ISP to Internet
int fa0/0
ip add 205.205.205.1 255.255.255.0
no sh
do wr
```

==== TASK 3: BASIC SECURITY ====

--- HQ ---

```
en
config t
hostname HQ
no ser pass
no ip domain-lookup
line con 0
pass sheenamae
logging synchronous
login
line vty 0 4
pass delima
login
exit
enable pass 04/16/2005
ena sec 2023-05210-MN-0
banner motd #WELCOME TO NETWORKING. STUDY HARD AND PERSEVERE!#
do wr
```

--- R1 ---

```
en
config t
hostname R1
no ser pass
no ip domain-lookup
line con 0
pass sheenamae
logging synchronous
login
line vty 0 4
pass delima
login
```

```
exit
enable pass 04/16/2005
ena sec 2023-05210-MN-0
banner motd #WELCOME TO NETWORKING. STUDY HARD AND PERSEVERE!#
do wr
```

--- R2 ---

```
en
config t
hostname R2
no ser pass
no ip domain-lookup
line con 0
pass sheenamae
logging synchronous
login
line vty 0 4
pass delima
login
exit
enable pass 04/16/2005
ena sec 2023-05210-MN-0
banner motd #WELCOME TO NETWORKING. STUDY HARD AND PERSEVERE!#
do wr
```

--- R3 ---

```
en
config t
hostname R3
no ser pass
no ip domain-lookup
```



```
line con 0
pass sheenamae
logging synchronous
login
line vty 0 4
pass delima
login
exit
enable pass 04/16/2005
ena sec 2023-05210-MN-0
banner motd #WELCOME TO NETWORKING. STUDY HARD AND PERSEVERE!#
do wr

-- ISP --
en
config t
hostname ISP
no ser pass
no ip domain-lookup
line con 0
pass sheenamae
logging synchronous
login
line vty 0 4
pass delima
login
exit
enable pass 04/16/2005
ena sec 2023-05210-MN-0
banner motd # WELCOME TO NETWORKING. STUDY HARD AND PERSEVERE! #
do wr
```

==== TASK 4: CREATING DHCP ====

DHCP/TFTP

IP Add: 192.168.0.196

Subnet: 255.255.255.224

Gateway: 192.168.0.193

PoolName: R1A_LAN

Gateway: 10.16.0.1

SM: 255.248.0.0

DNS: 192.168.0.195

Max users: 200

10th Usable IP: 10.16.0.10

PoolName: R1B_LAN

Gateway: 10.48.0.1

SM: 255.248.0.0

DNS: 192.168.0.195

Max users: 200

10th Usable IP: 10.48.0.10

PoolName: R1C_LAN

Gateway: 10.88.0.1

SM: 255.248.0.0

DNS: 192.168.0.195

Max users: 200

10th Usable IP: 10.88.0.10

PoolName: R1D_LAN

Gateway: 10.152.0.1

SM: 255.248.0.0

DNS: 192.168.0.195

Max users: 200

10th Usable IP: 10.152.0.10

PoolName: R2A_LAN

Gateway: 172.16.16.1

SM: 255.255.240.0

DNS: 192.168.0.195

Max users: 100

10th Usable IP: 172.16.16.10

PoolName: R2B_LAN

Gateway: 172.16.64.1

SM: 255.255.240.0

DNS: 192.168.0.195

Max users: 100

10th Usable IP: 172.16.64.10

PoolName: R2C_LAN

Gateway: 172.16.128.1

SM: 255.255.240.0

DNS: 192.168.0.195

Max users: 100

10th Usable IP: 172.16.128.10

PoolName: R2D_LAN

Gateway: 172.16.192.1

SM: 255.255.240.0

DNS: 192.168.0.195

Max users: 100

10th Usable IP: 172.16.192.10

PoolName: R3A_LAN

Gateway: 192.168.1.1

SM: 255.255.255.192

DNS: 192.168.0.195

Max users: 50

10th Usable IP: 192.168.1.10

PoolName: R3B_LAN

Gateway: 192.168.1.65

SM: 255.255.255.192

DNS: 192.168.0.195

Max users: 50

10th Usable IP: 192.168.1.74

PoolName: R3C_LAN

Gateway: 192.168.1.129

SM: 255.255.255.192

DNS: 192.168.0.195

Max users: 50

10th Usable IP: 192.168.1.138

PoolName: R3D_LAN

Gateway: 192.168.1.193

SM: 255.255.255.192

DNS: 192.168.0.195

Max users: 50

10th Usable IP: 192.168.1.202

==== TASK 5: CONFIGURING DNS ENTRIES====

DNS

IP Add: 192.168.0.195

Subnet: 255.255.255.224

Gateway: 192.168.0.193

Under services choose DNS

Name: www.ama.com

Address: 205.205.205.254

Add then Save

Name: www.fb.com

Address: 205.205.205.2

Add then Save

==== TASK 5: STATIC AND DEFAULT ROUTES====

a. In ISP Router

```
ip route 10.0.0.0 255.0.0.0 192.168.0.33
```

```
ip route 172.16.0.0 255.255.0.0 192.168.0.33
```

```
ip route 192.168.1.0 255.255.255.0 192.168.0.33
```

```
do wr
```

b. In HQ Router

```
ip route 0.0.0.0 0.0.0.0 192.168.0.62
```

```
do wr
```

c.

d. In R2

```
ip route 192.168.0.192 255.255.255.224 192.168.0.97
do wr
```

e. In R1

```
ip route 192.168.0.192 255.255.255.224 192.168.0.65
do wr
```

f. In R3

```
ip route 192.168.0.192 255.255.255.224 192.168.0.158
```

==== CLOCK RATE====

```
int se0/0
clock rate 64000
do wr
```

```
int se0/2
clock rate 64000
```

```
int se0/1
clock rate 64000
do wr
```

==== ADMIN & AMA DETAILS ====

ADMIN

```
IP Add: 192.168.0.194
Subnet: 255.255.255.224
Gateway: 192.168.0.193
DNS: 192.168.0.195
```

AMA

IP Add: 205.205.205.254

Subnet: 255.255.255.0

Gateway: 205.205.205.1

==== PC'S DETAILS ====

PC1_R1A

IP Add: 10.23.255.254

Subnet: 255.248.0.0

Gateway: 10.16.0.1

DNS: 192.168.0.195

PC1_R1B

IP Add: 10.55.255.254

Subnet: 255.248.0.0

Gateway: 10.48.0.1

DNS: 192.168.0.195

PC1_R1C

IP Add: 10.95.255.254

Subnet: 255.248.0.0

Gateway: 10.88.0.1

DNS: 192.168.0.195

PC1_R1D

IP Add: 10.159.255.254

Subnet: 255.248.0.0

Gateway: 10.152.0.1

DNS: 192.168.0.195

PC1_R2A

IP Add: 172.16.31.254

Subnet: 255.255.240.0

Gateway: 172.16.16.1

DNS: 192.168.0.195

PC1_R2B

IP Add: 172.16.79.254

Subnet: 255.255.240.0

Gateway: 172.16.64.1

DNS: 192.168.0.195

PC1_R2C

IP Add: 172.16.143.254

Subnet: 255.255.240.0

Gateway: 172.16.128.1

DNS: 192.168.0.195

PC1_R2D

IP Add: 172.16.207.254

Subnet: 255.255.240.0

Gateway: 172.16.192.1

DNS: 192.168.0.195

PC1_R3A

IP Add: 192.168.0.194

Subnet: 255.255.255.192

Gateway: 192.168.0.193

DNS: 192.168.0.195

PC1_R3B

IP Add: 192.168.1.126

Subnet: 255.255.255.192

Gateway: 192.168.1.65

DNS: 192.168.0.195

PC1_R3C

IP Add: 192.168.1.190

Subnet: 255.255.255.192

Gateway: 192.168.1.129

DNS: 192.168.0.195

PC1_R3D

IP Add: 192.168.1.254

Subnet: 255.255.255.192

Gateway: 192.168.1.193

DNS: 192.168.0.195

==== NETWORK BACKUP ====

enable

copy running-config tftp

192.168.0.196

HQ