

Source Codes and Output Photos

16.4.6 Packet Tracer - Configure Secure Passwords and SSH

Source Code

PCA Terminal

```
ena
conf t
host RTA
int g0/0
ip add 172.16.1.1 255.255.255.0
no shut
exit
service pass
security pass min-length 10
ena sec packettracer
no ip domain-lookup
ip domain-name CCNA.com
username leant secret packettracer
crypto key generate rsa
1024
login block-for 180 attempts 4 within 120
lin vty 0 15
transport input ssh
login local
exec-timeout 6
do wr
```

PCA Command Prompt

```
ssh /?
```

SW1 CLI

```
ena
conf t
host SW1
int vlan 1
ip add 172.16.1.2 255.255.255.0
no shut
exit
ip default-gateway 172.16.1.1
int range f0/2-24, g0/2
shutdown
exit
service pass
ena sec packettracer
no ip domain-lookup
ip domain-name CCNA.com
username leant secret packettracer
crypto key generate rsa
1024
login block-for 180 attempts 4 within 120
lin vty 0 4
transport input ssh
login local
exec-timeout 6
do w
```

Output Screenshot

Activity Results Time Elapsed: 00:33:56

Congratulations Guest! You completed the activity.

Overall Feedback **Assessment Items** Connectivity Tests

Expand/Collapse All Show Incorrect Items

| Assessment Items | Status | Points | Component(s) | Feedb |
|--------------------|---------|--------|---------------------|-------|
| Network | | | | |
| PCA | | | | |
| ✓ Default Gateway | Correct | 10 | Default Gateway... | |
| Ports | | | | |
| FastEthernet0 | | | | |
| ✓ IP Address | Correct | 8 | IPv4 Host Adre... | |
| ✓ Subnet Mask | Correct | 2 | IPv4 Host Adre... | |
| RTA | | | | |
| DNS | | | | |
| ✓ IP Domain-Lookup | Correct | 0 | Other | |
| ✓ Enable Secret | Correct | 5 | Configuration M... | |
| ✓ Host Name | Correct | 5 | Basic Security C... | |
| ✓ IP Domain Name | Correct | 5 | Hostname Confi... | |
| Login Options | | | | |
| Blocking | | | | |
| ✓ Attempts | Correct | 2 | Device Hardenin... | |
| ✓ Duration | Correct | 2 | Device Hardenin... | |
| ✓ Enabled | Correct | 4 | Device Hardenin... | |
| ✓ Period | Correct | 2 | Device Hardenin... | |
| Ports | | | | |
| FastEthernet0 | | | | |

| Component | Items/Total | Score |
|---------------------------------|-------------|-------|
| Basic Security Configuration | 9/9 | 33/33 |
| Configuration Management | 4/4 | 12/12 |
| Default Gateway Configuration | 2/2 | 15/15 |
| Device Hardening Configuration | 42/42 | 93/93 |
| Device Interface Configuration | 6/6 | 40/40 |
| Hostname Configuration | 2/2 | 10/10 |
| IPv4 Host Address Configuration | 2/2 | 10/10 |

Score : 213/213
Item Count : 67/67

16.5.1 Packet Tracer - Secure Network Devices

Source Code

```

RTR-A CLI
enable
conf t
hostname RTR-A
no ip domain-lookup
ip domain-name security.com
banner motd "Unauthorized access prohibited."
security passwords min-length 10
service password-encryption
enable secret @Cons1234!
login block-for 45 attempts 3 within 100
line con 0
password @Cons1234!
login
exec-timeout 7
exit
username NETadmin secret LogAdmin!9
line vty 0 15
transport input ssh
login local
exec-timeout 7 0
exit
crypto key generate rsa
1024
do wr
end

```

SW-1 CLI

```
enable
conf t
host SW-1
ip domain-name security.com
enable secret @Cons1234!
username NETadmin secret LogAdmin!9
int range f0/1 f0/3-9, f0/11-24, g0/2
shutdown
int Vlan1
ip add 192.168.1.254 255.255.255.0
no shutdown
exit
ip default-gateway 192.168.1.1
line vty 0 4
login local
transport input ssh
exit
crypto key generate rsa
1024
end
```

Output Screenshot

Activity Results Time Elapsed: 00:16:22

Congratulations Dela Rosa, Leant! You completed the activity.

Overall Feedback Assessment Items Connectivity Tests

Expand/Collapse All Show Incorrect Items

| Assessment Items | Status | Points | Component(s) | Feedback |
|-----------------------------|---------|--------|--------------------|----------|
| [-] Network | | | | |
| [-] RTR-A | | | | |
| [-] Banner MOTD | Correct | 2 | Basic Device Co... | |
| [-] Console Line | | | | |
| [-] Password | Correct | 2 | Basic Device Co... | |
| [-] Terminal Line timed out | Correct | 3 | Enhance Sessio... | |
| [-] DNS | | | | |
| [-] IP Domain Name | Correct | 2 | SSH Configuration | |
| [-] IP Domain-Lookup | Correct | 2 | Basic Device Co... | |
| [-] Enable Secret | Correct | 2 | Basic Device Co... | |
| [-] Host Name | Correct | 2 | Basic Device Co... | |
| [-] IP Domain Name | Correct | 2 | SSH Configuration | |
| [-] Login Options | | | | |
| [-] Blocking | | | | |
| [-] Attempts | Correct | 2 | Enhance Sessio... | |
| [-] Duration | Correct | 2 | Enhance Sessio... | |
| [-] Enabled | Correct | 3 | Enhance Sessio... | |
| [-] Period | Correct | 2 | Enhance Sessio... | |

Score : 98/98

Item Count : 52/52

| Component | Items/Total | Score |
|----------------------------|-------------|-------|
| Basic Device Configuration | 5/5 | 10/10 |
| Basic Switch Configuration | 28/28 | 37/37 |
| Enhance Session Security | 6/6 | 15/15 |
| Enhanced Password Security | 2/2 | 6/6 |
| SSH Configuration | 11/11 | 30/30 |

17.5.9 Packet Tracer - Interpret show Command Output

Source Code

ISP PC Terminal

```
ena
show arp
show flash
show ip route
show interfaces
show ip interface brief
show protocols
show users
show version
show ?
show flash
```

Output Screenshot

*No score output needed

Activity Results

Time Elapsed: 00:13:33

Congratulations Dela Rosa, Leant! You completed the activity.

Overall Feedback

Assessment Items

Connectivity Tests

You score for this activity is based on your answers to the questions in the Instructions. Consult your instructor.
If you are having difficulty completing this activity, refer to the following resource:

- Topic - Show Commands

17.7.7 Packet Tracer - Troubleshoot Connectivity Issues

Source Code

PC-01 Command Prompt

```
ipconfig
ping 172.16.1.1
ping 209.165.201.2
ping 172.16.1.4
ping 172.16.2 3
ping 172.16.2 4
```

PC-02 Command Prompt

```
ipconfig
ping 172.16.1.1
ping 209.165.201.2
ping 172.16.1.3
ping 172.16.2 3
ping 172.16.2 4
```

PC-A Command Prompt

```
ipconfig
ping 172.16.2.1
ping 209.165.201.2
ping 172.16.2 4
ping 172.16.1.3
ping 172.16.1 4
PC-A Telnet/SSH
172.16.1.1
Admin01
cisco12345
conf t
int g0/1
ip add 172.16.2.1 255.255.255.0
```

PC-B Command Prompt

```
ipconfig
ping 172.16.2.1
ping 209.165.201.2
ping 172.16.2 3
ping 172.16.1.3
ping 172.16.1 4
```

Output Screenshot

File Edit Options View Tools Extensions Window Help

Activity Results Time Elapsed: 00:34:55

Congratulations Dela Rosa, Leant! You completed the activity.

Overall Feedback **Assessment Items** Connectivity Tests

Expand/Collapse All Show Incorrect Items

| Assessment Items | Status | Points | Component(s) | Feedback |
|--------------------|---------|--------|--------------|----------|
| Network | | | | |
| PC-01 | | 0 | Other | |
| Ports | | 0 | Other | |
| FastEthernet0 | | 0 | Other | |
| IP Address | Correct | 5 | Ip | |
| PC-02 | | 0 | Other | |
| Default Gateway | Correct | 5 | Ip | |
| R1 | | 0 | Other | |
| Ports | | 0 | Other | |
| GigabitEthernet0/1 | | 0 | Other | |
| IP Address | Correct | 5 | Ip | |

| Component | Items/Total | Score |
|-----------|-------------|-------|
| Ip | 3/3 | 15/15 |

17.8.2 Packet Tracer - Skills Integration Challenge

Source Code

R1 CLI

```
ena
conf t
host R1
no ip domain-lookup
ip domain-name CCNA-lab.com
serv pass
banner motd "R1:Authorized Personnel only!"
login block-for 180 4 attempts within 120
security pass min-length 10
ena sec Ciscoenpa55
lin con 0
pass Ciscoconpa55
login
exec-timeout 5
exit
username Admin1 privilege 15 sec Admin1pa55
int range g0/0-2
no shut
exit
lin vty 0 15
transport input ssh
login local
exec-timeout 5
exit
crypto jey generate rsa
1024
int g0/0
ip add 192.168.0.1 255.255.255.128
ipv6 add FE80::1 link-local
ipv6 add 2001:DB8:ACAD::1/64
int g0/1
ip add 192.168.0.129 255.255.255.192
ipv6 add FE80::1 link-local
ipv6 add 2001:DB8:ACAD:1::1/64
int g0/2
ip add 192.168.0.193 255.255.255.224
ipv6 add FE80::1 link-local
ipv6 address 2001:DB8:ACAD:2::1/64
int s0/0/1
ip address 172.16.1.2 255.255.255.252
```

```
ipv6 address FE80::1 link-local
ipv6 address 2001:DB8:2::1/64
no shutdown
```

S1 CLI

```
ena
conf t
host S1
no ip domain-lookup
serv pass
ena sec Ciscoenpa55
ip default-gateway 192.168.0.1
lin con 0
pass Ciscoconpa55
login
exec-timeout 5
lin vty 0 4
exec-timeout 5
int vlan1
ip add 192.168.0.2 255.255.255.128
no shut
do wr
```

S2 CLI

```
ena
conf t
host S2
no ip domain-lookup
serv pass
ena sec Ciscoenpa55
ip default-gateway 192.168.0.129
lin con 0
pass Ciscoconpa55
login
exec-timeout 5
lin vty 0 4
exec-timeout 5
int vlan1
ip add 192.168.0.130 255.255.255.192
no shut
do wr
```

S3 CLI

```
ena
```

```

conf t
host S3
no ip domain-lookup
serv pass
ena sec Ciscoenpa55
ip default-gateway 192.168.0.193
lin con 0
pass Ciscoconpa55
login
exec-timeout 5
lin vty 0 4
exec-timeout 5
int vlan1
ip add 192.168.0.194 255.255.255.224
no shut
do wr

```

Output Screenshot

Cisco Packet Tracer - C:\Users\Leant\K\Desktop\College files\3-1 College files\Data and Digital Communications\17.0.2 Packet Tracer - Skills Integr...

File Edit Options View Tools Extensions Window Help

Activity Results Time Elapsed: 01:07:55

Congratulations Dela Rosa, Leant! You completed the activity.

Overall Feedback **Assessment Items** Connectivity Tests

Expand/Collapse All Show Incorrect Items

| Assessment Items | Status | Points | Component |
|----------------------|---------|--------|--------------|
| Network | | | |
| IT | | | |
| Default Gateway | Correct | 3 | IPv4 Host D |
| Default Gateway IPv6 | Correct | 1 | IPv6 Host Ac |
| Ports | | | |
| FastEthernet0 | | | |
| IP Address | Correct | 2 | IPv4 Host Ac |
| IPv6 Addresses | | | |
| 2001:DB8:ACAD:2::2 | | | |
| IP Address | Correct | 1 | IPv6 Host Ac |
| Prefix Length | Correct | 1 | IPv6 Host Ac |
| Link Local | Correct | 1 | Ip |
| Subnet Mask | Correct | 2 | IPv4 Host Ac |
| R1 | | | |
| Banner MOTD | Correct | 1 | Basic Device |
| DNS | | | |
| IP Domain Name | Correct | 1 | SSH Config |
| IP Domain-Lookup | Correct | 1 | Basic Device |
| Enable Secret | Correct | 1 | Basic Device |
| Host Name | Correct | 1 | Basic Device |
| Login Options | | | |
| Blocking | | | |
| Attempts | Correct | 1 | Enhanced L |

Score : 128/128

Item Count : 82/82

| Component | Items/Total | Score |
|---|-------------|-------|
| Basic Device Configuration | 17/17 | 17/17 |
| Enhanced Login Security | 9/9 | 9/9 |
| IPv4 Host Addressing | 6/6 | 12/12 |
| IPv4 Host Default Gateway Configuration | 3/3 | 9/9 |
| IPv6 Host Addressing | 9/9 | 9/9 |
| Ip | 3/3 | 3/3 |
| Router Interface Configuration | 3/3 | 3/3 |
| Router Interface IPv4 Addressing | 6/6 | 18/18 |
| Router Interface IPv6 Addressing | 9/9 | 9/9 |
| SSH Configuration | 5/5 | 6/6 |
| Switch Management Interface Addressing | 6/6 | 18/18 |
| Switch Management Interface Configuration | 3/3 | 3/3 |
| Switch Management Interface Default Gateway | 3/3 | 12/12 |

17.8.3 Packet Tracer - Troubleshooting Challenge

Source Code

R1 CLI

```
Ciscoconpa55
ena
Ciscoenpa55
conf t
int g0/1
ip address 172.16.1.126 255.255.255.192
username Admin1 secret Admin1pa55
line vty 0 4
transport input ssh
do wr
```

S2 CLI

```
Ciscoconpa55
ena
Ciscoenpa55
conf t
int vlan1
ip address 172.16.1.125 255.255.255.192
do wr
```

Output Screenshot

Cisco Packet Tracer - C:\Users\Leant\OneDrive\Desktop\College files\3-1 College files\Data and Digital Communications\17.8.3 Packet Tracer - Troubleshooting Challenge

File Edit Options View Tools Extensions Window Help

Activity Results Time Elapsed: 00:12:53

Congratulations Dela Rosa, Leant ! You completed the activity.

Overall Feedback Assessment Items Connectivity Tests

Expand/Collapse All Show Incorrect Items

| Assessment Items | Status | Points | Component(s) | Feedback |
|--------------------|---------|--------|--------------|----------|
| Network | | | | |
| IT | | | | |
| Default Gateway | Correct | 1 | Ip | |
| Ports | | 0 | Other | |
| FastEthernet0 | | 0 | Other | |
| IP Address | Correct | 1 | Ip | |
| R&D | | 0 | Other | |
| Ports | | 0 | Other | |
| FastEthernet0 | | 0 | Other | |
| IPv6 Addresses | | 0 | Other | |
| 2001:DB8:CAFE:2::2 | | 0 | Ip | |
| IP Address | Correct | 1 | Ip | |
| R1 | | | | |
| Ports | | 0 | Other | |
| GigabitEthernet0/1 | | 0 | Other | |
| IP Address | Correct | 1 | Ip | |

| Component | Items/Total | Score |
|-----------|-------------|-------|
| Ip | 5/5 | 5/5 |
| Other | 1/1 | 1/1 |
| Physical | 5/5 | 5/5 |