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practical 1:- Configuring WEP on a Wireless Router.

1. Start cisco packet tracer.

2. Click on End devices → Drag two pc's (PC-PT)

3. Click on Hubs → switches → Drag 2960 switch (2960-24TT switch)

4. Click on Miscellaneous → Drag two 1841 Routers.

5. Connect all ~~mach~~ pc, switch, router with each other with copper straight-Through.

6. click on connections → Select ~~click~~ on copper straigh-Through wire → click pc-pT pc0 (FastEthernet0) to 2960-24TT switch0 (FastEthernet 0/1)

7. Connect switch0 FastEthernet 0/2 to → Router0 FastEthernet 0/0

8. Connect pc1 FastEthernet0 to → Switch1 FastEthernet 0/1

9. Connect Switch1 FastEthernet 0/2 to → Router1 FastEthernet 0/0

10. Connect two routers serially.
choose connectn → Serial DCE Wire
click on Router0 Serial 0/0/0 →
Router1 Serial 0/0/0

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11. Now click on PC0 → go to desktop click on Ip configuration
Ip Address : 192.168.1.2
Subnet Mask : 255.255.255.0 (Automatically generated)
Default Gateway : 192.168.1.1

12. Now click on pc1 → go to desktop click on Ip configuration
Ip Address : 192.168.2.2
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.2.1

13. Now click on Router0 → go to config → then go to FastEthernet 0/0
☑ on
Ip Address : 192.168.1.1
Subnet Mask : 255.255.255.0

14. Now click on Router1 → go to config → then go to FastEthernet 0/0
☑ on
Ip Address : 192.168.2.1
Subnet Mask : 255.255.255.0

15. Click on Router0 → go to config → then go to Serial 0/0/0
☑ on clock Rate | 64000 | ▼ drop down select
Ip Address : 10.0.0.1
Subnet Mask : 255.0.0.0

16. Click on Router 1 → go to config → then go to Serial 0/0/0
☑ on clock Rate : 64000
Ip Address : 10.0.0.2
Subnet Mask : 255.0.0.0

17. Click on Router0 → go to config → click on RIP → CLI
Router (config-router) # version 2
↑ write this command.
enter

→ Router 0 → config → RIP →
Network : 10.0.0.0 → Add
192.168.1.0 → Add

18. Click on Router1 → go to config → click on RIP → CLI
Router (config-router) # version 2
enter
→ Router 1 → config → RIP →
Ip Address Network : 10.0.0.0 → Add
: 192.168.2.0 → Add

19. Click on ~~Wireless~~ Network Devices → Wireless Devices
→ Drag one wireless Router0 (WRT300N)

20. Connect Wireless Router0 with switch 0 :-
go to connection → choose copper-straigh Through wire.

Click on Switch0 FastEthernet 0/3 → to Wireless Router 0 Ethernet 1

21 Also connect Router 0 & Wireless router 0 with copper-straight through wire.

click on Router 0 FastEthernet 0/1 → Wireless Router Ethernet 2

To config

22. Click on Router 0 → config → FastEthernet 0/1 on

Ip Address : 20.0.0.1

Subnet Mask : 255.0.0.0

Click

23. Wireless Router 0 → GUI → Setup

Network Setup :-

Router Ip → Ip Address : 192 . 168 . 01 . 1

click on Save Settings

24 click Wireless Router 0 → GUI → Wireless security →

Security Mode : Select WEP

5 times 2a

key 1 : 2a2a2a2a2a

Click on Save settings

5-4 min

25. Click on End devices → Drag PC-PT PC2 → physical → power off machine 0 → replac it with ~~wireless~~ → wired pheripheral with wire pheripheral & switch on the machine.

26. PC2 → config → Wireless 0 → In Authenticat Select OWEP WEP key 2a2a2a2a2a

27. Click on Router0 → config → RIP → Network: 20.0.0.0 → Add

28. Drop PDU.

Practical 4: planning Network-based Firewalls

1. click on End devices → Drag on Server-PT server0

2. Click on End devices → Drag 3 pc-PT machine.

3. Click on Network Devices → Wireless Devices → Drag on WRT300N Wireless Router0

4. Connect Server0 to wireless Router0
   :- go to connection → choose copper-straight-through wire.

5. Connect Server0 FastEthernet0 →
   Wireless Router0 Ethernet1

   wait until connectn converted to green (1 min).

5. Click on Server0 → Desktop → click on Ip Configuration
   → click on ⊙ DHCP
   ⇓ then Ip address of Server0 will automatically generated

   Ip address : 192.168.0.100

6. Then add label above the server
   192.168.0.100

7. Click on pc-PT pc0 → it is wired → so switch off power button → then remove the

Wired component with wireless component.
And power on the machine.

8. DO Same thing for pc-PT pc1, pc-PT pc2.

9. Click on pc-PT pc1 → Desktop → Command prompt →
And ping the server:
ping 192.168.0.100 ← Insert this command on command prompt.
wait for replay.

10. Click on pc-PT pc1 → Desktop → Web Browser →
URL [192.168.0.100] → click on Enter
And you get web interface so Ip protocol also on.

11. Click on Server0 → Desktop → click on IpV4 Firewall in that:-
Services ⊙ on click on on

Action [Deny ▽] protocol [IcMP ▽]

Remote IP [0.0.0.0] Remote wild card Mask [255.255.255.255]

then click on → [Add]

12. Action [Allow] protocol [IP]

Remote Ip [0.0.0.0] Remote wildcard Mask: [255.255.255.255]

Click on → [Add]

So I'm able to access the web site.

13. click on pc-PT pc1 → Desktop → Command prompt & again enter same command:-

C:\> ping 192.168.0.100

it waiting for replay & the request is ~~time out~~ timed out

So wait fo 4 Iteration.

You can see

ping statistics for 192.168.0.100:

packet: sent = 4, Received = 0, Lost = 4 (100% loss).

in previous command we had 0% loss because 4 packets are received successfully

14. Check Ip protocol is on or not.

~~we kept it on so~~

Pc-PT pc1 → Desktop → web Browser

URL : [192.168.0.100] → Enter

we kept it on so it is accessable

So pc-PT pc1 im able to access server but I'm not able to ping because of the firewall

15 Same think you can check it out from pc-PT
PC0 → Desktop → command prompt →
ping 192.168.0.100 → Enter.

It has blocked.
Request timed out & let complete 4 iteration

[check for web browser ~~(pc0)~~ (PC0)] →
PC0 → Desktop → web ~~browser~~ →

URL : | 192.168.0.100 | Enter

Ip protocol is on.

16 Similarly do above process that is step 15 for PC-PT PC2

ping is not accessible because ICMP is denied.

Practical 6: Creating an Adhoc Network.

1. Click on Network Devices → click on Wireless Devices → Take 2 WRT300N wireless Routers (WRT300N Wireless Router0, WRT300N Wireless Router1)

2. Connection :-
   Click on connection → choose copper cross-over wire.

   Connect Wireless Router0 Ethernet1 → Wireless Router1 Ethernet1

3. Click on Wireless Router0 → GUI → click on Wireless →
   Network Name (SSID): CS

4. Click on Wireless Router0 → GUI → click on Wireless security →
   Security Mode : WPA2 Personal
   Passphrase : ciscorouter1
   click on Save Settings

5. Click on Wireless Router0 → GUI → click on Admistration

Remote Access

Remote Management ⊙ Enabled
↖ click

click on [Save settings]

6. Similarly do same thing on wireless Router1.
Click on Wireless Router1 → GUI → Wireless → Basic Wireless settings →

Network Name (SSID): [IT]

→ Go ←

7. click on Wireless Router1 → GUI → click on Wireless Security →
Security Mode : [WPA2 personal]

passpharse : [ciscorouter2]

click on [Save settings]

8. click on Wireless Router 1 → GUI → click on Administration
Remote Access · Remote Management ⊙ Enabled
↖ click.

click on [save settings]

9. check both wireless router connected with each other or not by dropping PDU.

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10. Click on End devices → Take 5 PC-PT. (PC-PT) PC0, PC1, PC2, PC3, PC4.

Connect machines (PC's) with wireless routers.

11. Click on PC-PT PC0 → power off → remove wired component & attach wireless component → power on button

Similarly, repeat this step for rest 4 machines PC1, PC2, PC3, PC4.

~~11.~~ Now all PCs have wireless devices.

11. PC0 → Desktop → PC Wireless → click on Connect → click on Refresh
get 2^n wireless n/w Name.
→ CS
→ IT

~~12.~~ Click on CS :- Preshared key | ciscorouter1

→ click on connect.

12. ~~13.~~ PC1 → Desktop → PC Wireless → click on Connect → click on Refresh.
Click on IT :- Preshared key : | ciscorouter2
→ click on connect.

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13. pc 2 → Desktop → pc Wireless → click on connect → click on ~~Refersh~~ Refresh

click on CS :- preshared key : [ciscorouter1]
click on connect

14. pc3 → Desktop → pc wireless → click on connect → ~~eor~~ Click on Refresh
click on CS :- preshared key : [ciscorouter1]
click on connect.

15. pc4 → Desktop → pc wireless → click on connect → click on Refresh
click on IT :- preshared key : [ciscorouter2]
click on connect.

16. Wireless Router0 → Lable → [CS]
Wireless Router1 → Lable → [IT]

17. Drop pDU . check interconnectivity & Connectivity.

Practical 07 :- Configuring Basic Ap settings

1. Click on Network Devices → click on Wireless Devices → Take 2 AccessPoint-PT.
   (Access Point0, Access point1)

2. Double click on Access Point0 → config → port 1
   ☑ on
   SSID [cs] ← ∵ because I need to define 2 network
   Authentication
   ⊙ WPA2-PSK PSK pass phrase : [ciscopacket1]

3. Double click on Access point 1 → config → port 1
   ☑ on
   SSID [IT]
   Authentication
   ⊙ WPA2-PSK PSK pass phrase : [ciscopacket2]

4. Click on End Devices → Take 4 pc-pT's.
   PC0, PC1, PC2, PC3.

5. click on PC0 → Desktop → Ip Configuration → Static
   Ip address : 192.168.1.2
   Subnet Mask : 255.255.255.0 (Automatically generated)
   Default Gateway : 192.168.1.1

6. Click on PC1 → Desktop → Ip configuration → Static
Ip Address : 192.168.1.3
Subnet Mask : 255.255.255.0
Default Gateway: 192.168.1.1

7. Click on PC2 → Desktop → Ip configurat° → Static
Ip Address : ~~19~~ 171.16.10.2
Subnet Mask : 255.255.~~255~~.0.0
Default Gateway : 171.16.10.1

8. Click on PC3 → Desktop → Ip configurat° → Static
Ip Address : 171.16.10.3
Subnet Mask : ~~2~~ 255.255.0.0
Default Gateway: 171.16.10.1

9. All the PC's has the wired connection so, Convert it into wireless connection.

click on PC0 → physical → power off → remove wired component with wireless component → power on

10. Do same step 9. for PC1, PC2, P3

11. Accesspoint-PT 0 → labled → Accesspoint-PT CS
Accesspoint-PT 1 → labled → Accesspoint-PT IT

PC-PT	PC0	labled →	PC-PT CS-1
PC-PT	PC1	Labled →	PC-PT CS-2
PC-PT	PC2	Labled →	PC-PT IT-1
PC-PT	PC3	Labled →	PC-PT IT-2

12. Click on CS-01 → config → Wireless 0 →
SSID [CS]

Authentication
⊙ WPA2-PSK PSK Pass phrase: [ciscopacket1]

13. Click on CS-2 → config → Wireless 0 →
SSID [CS]

Authentication
⊙ WPA2-PSK PSK Pass phrase: [ciscopacket1]

14. Click on IT-1 → config → Wireless 0 →
SSID [IT]
Authentication
⊙ WPA2-PSK PSK Pass phrase: [ciscopacket2]

15. Click on IT-2 → config → wireless 0 →
SSID [IT]

Authentication
⊙ WPA2-PSK PSK Pass phrase: [ciscopacket2]

16. Click on Miscellaneous → Take 2 1841 Routers (Router 0, Router 1)

17. Connect 1841 Router 0 to 1841 Router 1 serially.
connection → select serial DTE
Router 0 Serial 0/0/0 → to
Router 1 Serial 0/0/0

18. Click on Router 0 → config → Serial 0/0/0
☑ on
Clock Rate : 64000

Ip Address : 20.0.0.1
Subnet Mask : 255.0.0.0 (Automatically generated)

19. Click on Router 1 → config → Serial 0/0/0
☑ on
Clock Rate : 64000
Ip Address : 20.0.0.2
Subnet Mask : 255.0.0.0

20. Route 0 connect Router & Access point.
connection → choose copper Cross-over
Router 0 FastEthernet 0/0 → to
Access point 0 (CS) port 0

21 Click on Router 0 → config → FastEthernet 0/0
☑ on

Ip Address : 192.168.1.1
Subnet Mask : 255.255.255.0 ✓ default gateway

22. Click on
Router 1 → config → ~~FastEthernet 0/0~~ →
☑

22. connection → Copper cross-over wire.
Router 1 FastEthernet 0/0 → to
Access point : (IT) port 0

23. Click on Router1 → config → FastEthernet 0/0
→
☑ on
Ip Address : 171.16.10.1
Subnet Mask : 255.255.0.0.

24. Drop PDU.

25. Click on Router0 → config → RIP → CLI

version 2 → enter.

26. Router 0 → config → RIP →
Network : 20.0.0.0 → Add
: 192.168.1.0 → Add.

27. CS-1 (PC0) → Desktop → Ip configuration
⊙ static
Ip Address : 192.168.1.3
Subnet Mask : 255.255.0255.0

Default Gateway : 192.168.1.1

28. CS-2 (PC1) → Desktop → Ip configuration
→ ⊙ static
Ip Address : 192.168.1.4
Subnet Mask : 255.255.255.0
Default Gateway : 192.168.1.1

29. IT-1 (PC2) → Desktop → Ip configuration
→ ⊙ static
Ip Address : 171.16.10.2
Subnet Mask : 255.255.0.0
Default Gateway : 171.16.10.1

30 IT-2 (PC3) → Desktop → Ip configuration
→ ⊙ static
Ip Address : 171.16.10.3
Subnet Mask : 255.255.0.0
Default Gateway : 171.16.10.1

31. Drop PDU.

32. Click on Router 1 → config → RIP → CLI
version 2 → enter

33. Router 1 → config → RIP →
Network : 171.16.10.0 → Add
20.0.0.0 → Add.

34. Drop PDU