<u>Aim-7</u>

7. Configure OSPF routing protocol

Topology:

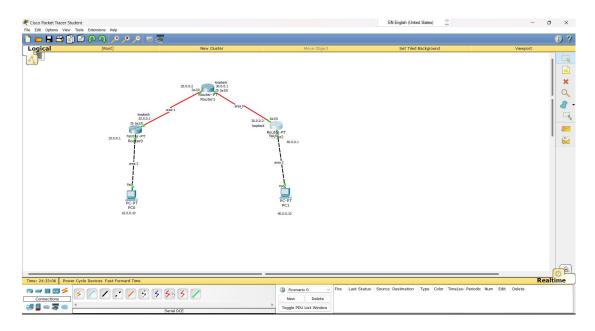


Fig 1: Topology

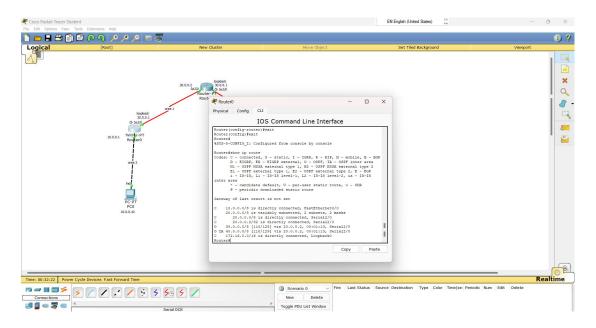


Fig 2: Routing table of Router 0

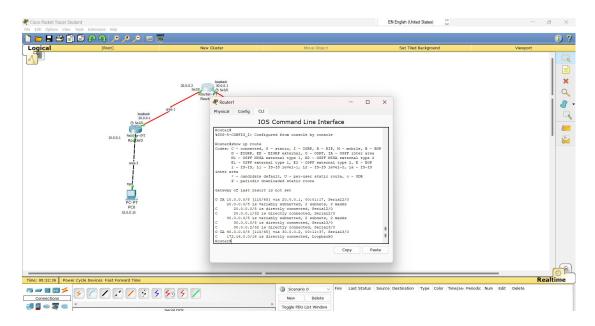


Fig 3: Routing table of Router 1

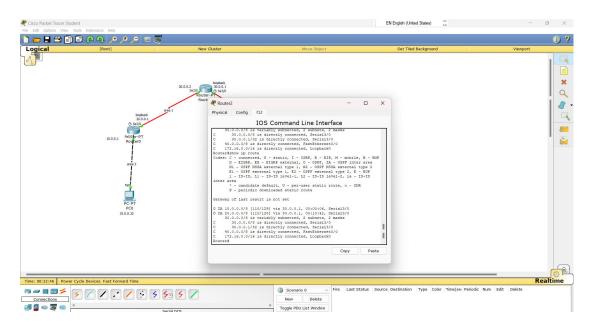


Fig 4: Routing table of Router 2

Procedure and Observations:

27/07/23 Aim-7	
7. Configur OSPF routing Protocol.	
Topolog y:	loopbacko
loopbarko gesta	o Ses/o area O lo ep back o
Foolo, Ro	30.0.0.2
(0.0.0.), onlea 3	Fao/o, R2 , 40.0.0.1
O HALL Abil.	while when the day of the whole
pco 10.0.0.10 DC: 10.0.0.1	60.0.0.10 Ou:40.0.0.1
Procedure: => Configur pcs 4	the coultry with IP addur
I default gaturay	according to the topology
Jun above. 2) Configure the w	outers as Jean in the
fopology to be set as done in riprouting - protocol experiment.	

at Now enable ip louding by configu ring OSPF routing protocol in all Loutus. In Route Ro Ro Cconfig) # Louder OSPFI po (config-wester) # router-id 1.1.1.1 Ro (Config - route) # network 10.0.0.0 Ro (config-route) # network 20.0.0.0 0.255.255.255 Ro Coonfig-routu) # exit In Route R, Ricconfig)# contre OSPFI de la face Ri (Config-conter) # router-id 2.2.2.2) R. (config- Louter) # network 20.0.0.0 0.255.255.25 R. (config-route) # network 30.0.0.0 0.255.255.255
R. (config-route) # exit area o In Route RL R_ (config) # router OSPF1 Re (config-routu) # routu-id 3.3.3.3 Re (config-route) # 10 retwork 30.0.00 0.255. LSS. 255 area 0

Re Config-wouter) # network 40.0.00 0.255.45.25 Re (configuration) # exit => Now Configuring the Virtual interface In Route Ro Router # config t contre (config) # interfale Social 2/0 router (config-if) # interface loopback o router (config-if) # ip address 172.16.1.252 router (config-if) # no Shut In Route R1 router # config t router (config) # interfale Serial 3/0 contre (config-if) # interface loopbacko 10utu (config-if) # ip address 172.16.1.253 router (config-if) # no shut In Route Rz router # Configt router (config) # interfale Serial 3/0 router (config-if) # interfale loopback o

Loute (config-if) # 10 address 172-16.1.254 router (config-1) # no shut => Create Virtual line between RI, R2 by His we create a Virtual link to connect areas to areao. In Route Rolldown Maribo 12 3100000 route # config tomas planis is a gloss contre (config) # contre OSPF1 route (config-route) # arear Virtual-link 2.2.22 router (config-router) # exit In Route R. router # config t router (config) # router OSPFI router (coofig-router) # area I Virtual-link router (config-router) # exit => RffR2 get updates about Acces. Now, cheek routing table of Ro. 10.0.00 siv (2d au) 80.0.0.01 router (boldondoly plasing Li 8/ 0,0.0

In Route Ro router (config) # exit on the Route # Thow ip wate C 10.0.0.0/8 is directly Connected, Fastether. 20.0.0.0 18 is diffely variably Subnetted, 2 Subnets, 2 mayks C 20.0.0.0/8 is directly Connected, Swaly c 20.0.0.2/32 is directly connected, I wid 40 0 30.0.0.0/8 (110/128) Via 20.0.0.2, 00:01:13 0 IA 40.0.0.0/8 (no/129) Via 20.0.0.2,00:01:13. C 172.16.0.0/16 is directly connected, Loopbacko. => Now check routing table of ROGR2. In Route Ro router (config) # exit route # show is route 01A 10.0.0.0/8 (10/65) Via 20.0.0.1, 00:01:17, Scuid 2/0 20.0.0.0 /8 is Vouiably Subnetted, 2 Subnets, 2 mayks

c 20.0.0.0/8 is directly connected, Sevial 2/0 20.0.0.1/32 is directly connected, Said 40 30.0.0.0 (8 is Variably Subnetted, 2 Subnet, entable la lateral is the 2 mostles primite 30.0.0.018 is directly connected, Sevial 3/0 - 30.0.0.2/32 is directly connected, I wind 3/0 0 lA 40.0.0.0 (8 (110/65) Via 30.0.0.2, 00:11:37 C 172-16.0.0/16 is directly connected, Loopha-In Route RE when a so of and plan router (config) # exit router # show ip route of sould be 0 1A 10.0.0.0/8 (110/129) Via 30.0.0.1,00:01:5 01A 20.0.0.018 (110/128) Via 30.0.0.1, 00:12:16 Suia 3/0 30.000/8 is Variably Subnetted, 2 Subn -ets, 2 mayles c 30.0.0.0/8 is directly connected, Sevial C 30.0.0.1 /32 is directly connected, Said 3 c 40.0.0.018 is directly connected, FostEthen

c 172.16.0.0/16 is directly connected, Loopbaylo = L Pinging from pro to per => Ping 40.0.0.10 Pinging to.0.0.10 with 31 bytes of data: Request find out Reply Jum 40.0.0.10! bytes=32 time=2ms Reply Jeon 40.0.0.10: byty = 32 time = 7 ms Reply from 40.0.0.10: bytes=32 time=6 ms Ping statistics for 40.0.0.10; Packets: Sent 24, Received = 3, Lost 21 (2506 los) Approximate round trip times in milli-scools Minimum = 2 ms, Marinum 27 ms, Average = 5 mg = Pinging from PCI to PCO -> Ping 10.0.0.10 Pinging 10.0.0.10 with 32 bytes of data;

Reply from 10.0.0.10: bytes=32 time=2ms Reply from 10.0.0.10: by + cs = 32 time = 2 ms Reply from 10.0.0.10: bytes = 32 time = 218 mg Reply from 10.0.0.10: bytes = 32 time = 2 mg TIL=125 Ping statistics for 10,0,0.10: Padats: Sent =4, Received =4, Lost =0 (00/0100), Approximate round trip times in millipolinimum = 2ms, polanimum 26ms, Average = 8 ms. observation! = 4 OUPF (open Short path First) -> It is a open Standard routing protocol => link Hate routing protocol - } Alogishmo uses is "Dijkistra", to find shoutest path. Jee 2/1/23

Output:

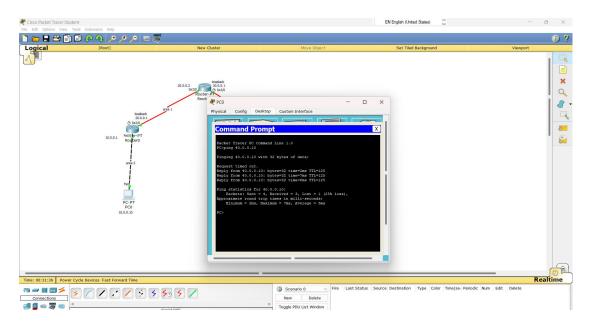


Fig 5: Pinging from Pc0 to Pc1

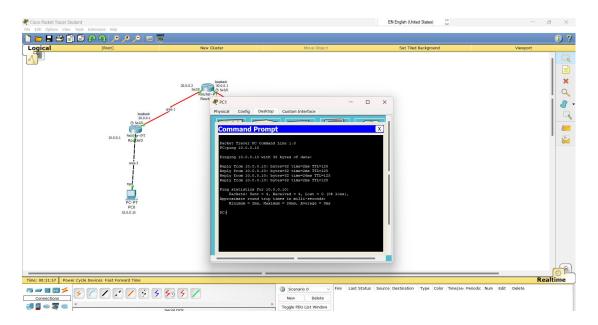


Fig 6: Pinging from Pc1 to Pc0