Experiment 6:

OSPF Routing protocol

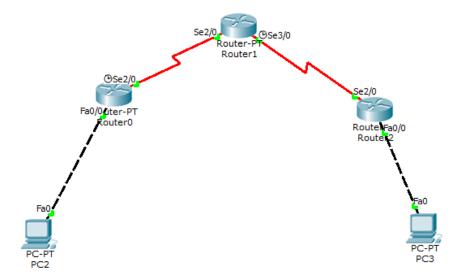
	Classmate Date Page		
9	OSPF Protocol		Rout
	and the state of t		R2(
The section	Him: Configure OSPF northing protocol		R21
			R2 (
	Topology:		R2
_	Asia Asia O		R2
-	3/2 ale 13/0 sa/0		
-	1 2 R2 R3 40.0.0.1		R
	3 120.000 30.000 30.000 Asea H		R3
~	AREA A DOTO		R3
~			R3
~	PC 0 PC 1		R
~	10-0-0-10		R
~	Proceduse:	,	-
~	Inficeduse.	→	
~	Coulis of P. addes 1 and art of any to the		1
	Configure IP address and gateway according to the		7
	topology seen above		-
	Configure each gentle According to the Ip address		
	given in the topology. Encapsulation ppp and clock nate need to be	-	-
	Ancipsulation ppp and clock that need to be		
	set as done in RIP protocol experiment		1
7	outer!		
			1
	Wherfig) # nouter sup supp 1	1	1
/	? (config & - monter) # nonter-id 1:1:1:1	-	+
	(Config - souter) # network 10.0.0.0.0.155.255-255 area 3	-	+
R	(config-neuter) # network 20.0.0.0 0.255.255.265 area!	-	
*	(config - notiter) # exit.	-	1
		1	
790	exply visitual link blook of so R2 by this me much		
6	mystle a virtual link to connect to Area o		
	The so renge to Area		
		1	

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	1	Router 2:
	1	R1 (config) # notuler outpf!
		R2 (config - nouter) # nouter -id 2.2.2.2
		R2 (config-nonter)# helwork 20.0.0.0 0.255.255.255 area!
		R2 (config-soutes) A network 30.0.0.000.255.255.255 area 0
	1.	£2 (config-router) # exit.
1	-	Louter 3:
154	-	R3 (config)# montes ospf 1
	-	R3 (config-nontie)# monter-id 3.3.3.3
		R's (config-nonter) # network 30.0.0.0 0.255.255.255 area 0
	-	R3 (config-render) # network 40.0.0.0 0.255-255.355 area 2
		R3 (config-route) # exit
		The a the satisfies have the continues
	1	To keep the nouters active we have to configure
the		interface loppback
7:00		Router 1.
ress		RI (wonfig - if) = interface loopback 0
w8		RI (config-if) # ip address 172-16-1-252 255-255\$255.0
		RI (config-if) #1 no shuldown
<i></i>		
		Renter 2:
		R2 (config - 1) # interface loopback 0
		72 (config - if)# 3p address 172.16.1.253 255.255.255.0
	1	B) (calls - il) Ht as shit lown
-		R2 (config-if)# no shutalown.
rea 3		
real		Router 3:
		R3 (contig-it) # Interface loopback 0
		R3/config-1/ # ip addsess 172-16-1-39
mot		R3(config-if)# no shutclown.
-		

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→ →	Geale a virtual link b/w RI, R2 by this we can create a virtual link to connect to area o.		Rou
	Roules RI: RI (config) # soules espl / RI (config- nouter) # area I visitual-link 2.2.2.2		01
	Router R2;		C
	R2 (config) # nouter OSpf 1 R2 (config nouter) # area 1 viritual-link (·1·1·1		0:
	Finally, After creating visitual # link, show ip monte for all neuters.		96s
	Result;		The
	pc> ping 40.0.0.10 pinging 40.0.0.10 with 32 bytes of data		des ne th
-	Reguest timed out Reply from 40.0.0.10: bytes = 32 time = long TTL.18. Reply from 40.0.0.10: bytes = 82 time = 2mg TTL.18.	19	as
	Per Packets: Sent = H, Received = 3, Lost = 1 (25% loss)	9	
	Approximate mound - hip & in milli seconds Minimum = 2ms, Maximum - 10ms, Average = 7ms.	(9)	17/4

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7	Greate a virtual link 1/20 RI, R2 by this we can create a virtual link to connect to area o.		From
	Romber RI:		OI
	RI (config) # router espt / RI (config-router) # area / virtual-link 2.2.2.2		C
	Router R2:		
	P2 (conf)		C
	R2 (confrig) # norther Espf !		C
	R2 (config-nouter) -# area / virtual-link 1.1.1.1		0
1	R2 (eonfig-granter) #exit		
	Finally, After creating virtual # link, show ip monte		965
	for all quiters.		
			Th
	Result:		ės
	pc> ging 40.0.0.10 with 32 bytes of data		des
	friging no or to with 32 syles of data		ne
1	Request timed out	19	11
+	Reply from 40.0.0.10: bytes = 32 time = long TTL.105		ar
	Reply from 40.0.0.10: bytes = 82 time= 2mg TTL-125		
	Reply from 40.0.0.10: bytes = 32 time-9ms TTL=125.		
	ping statistics for 40.0.0.10: Par Packets: Sent=4, Received = 3, Lost=1 (25% loss),	0	
	approximate round trip & in milli seconds	G	1
	Minjum = 2ms, Maximum = 10ms, Average = 7ms.	(9)	X
	The sage - Ins.		10
			1
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		E471.6-331/16	1/1/2

Topology and output screenshots:



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PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 40.0.0.10: bytes=32 time=9ms TTL=125
Reply from 40.0.0.10: bytes=32 time=2ms TTL=125
Reply from 40.0.0.10: bytes=32 time=2ms TTL=125
Reply from 40.0.0.10: bytes=32 time=2ms TTL=125
Ping statistics for 40.0.0.10:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 9ms, Average = 3ms
```