Data Communication and Computer Networks

EEE314

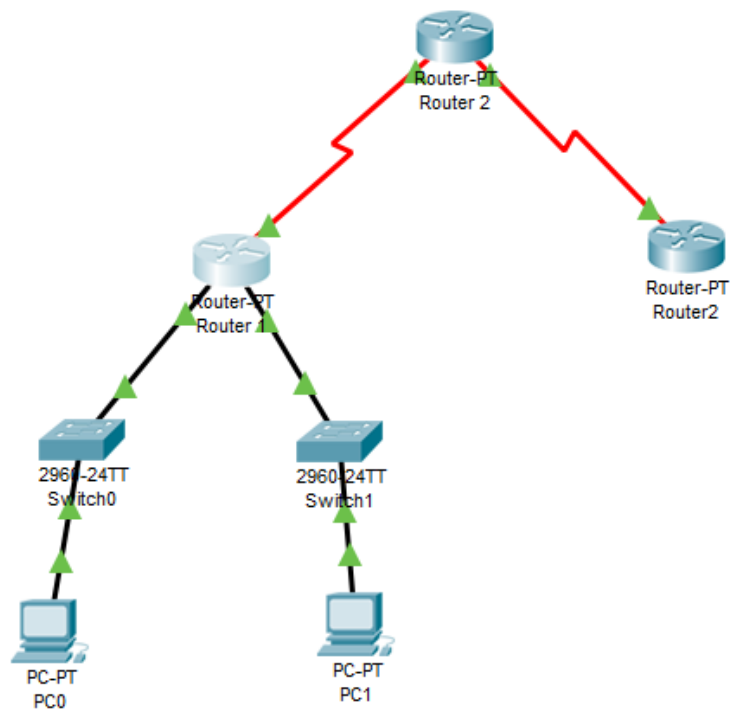# Lab # 11

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Lab #11 DHCP Configuration

In-Lab Task

Topology:

HOME TASK

Show ip dhcp pool:

R2#show ip dhcp pool

Pool R1Fa0 :
Utilization mark (high/low) : 100 / 0
Subnet size (first/next) : 0 / 0
Total addresses : 254
Leased addresses : 1
Excluded addresses : 2
Pending event : none

1 subnet is currently in the pool
Current index IP address range Leased/Excluded/Total
192.168.10.1 192.168.10.1 - 192.168.10.254 1 / 2 / 254

Pool R1Fa1 :
Utilization mark (high/low) : 100 / 0
Subnet size (first/next) : 0 / 0
Total addresses : 254
Leased addresses : 1
Excluded addresses : 2
Pending event : none

1 subnet is currently in the pool
Current index IP address range Leased/Excluded/Total
192.168.11.1 192.168.11.1 - 192.168.11.254 1 / 2 / 254

Show IP route:

R1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is 209.165.200.226

10.0.0.0/30 is subnetted, 1 subnets
C 10.1.1.0 is directly connected, Serial0/0/0
O 192.168.10.0/24 [110/65] via 10.1.1.1, 00:16:26, Serial0/0/0

O 192.168.11.0/24 [110/65] via 10.1.1.1, 00:16:26, Serial0/0/0
C 192.168.20.0/24 is directly connected, FastEthernet0/0
209.165.200.0/30 is subnetted, 1 subnets
C 209.165.200.224 is directly connected, Serial0/0/1
S* 0.0.0.0/0 [1/0] via 209.165.200.226

ISP Router:

Show ip route

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

209.165.200.0/30 is subnetted, 1 subnets
C 209.165.200.224 is directly connected, Serial0/0/1

Critical Analysis / Conclusion

In this lab we learnt about DHCP (Dynamic Host Configuration Protocol) it is a network management protocol used to dynamically assign an IP address to any device so they can communicate.

Moreover, we implemented this on a topology given to us and successfully assigned IP's using release and renew subcommands of ipconfig.

Lab Assessment		
Pre Lab	**/5**	
Performance	**/5**	
Results	**/5**	***/25***
Viva	**/5**	
Critical Analysis	**/5**	
Instructor Signature and Comments		