Configure DHCP Server

R1> *enable*	
R1# *configure terminal*	
R1(config)# *int f0/0*	
R1(config-if)# *ip address 10.1.1.2 255.255.255.0*	
R1(config-if)# *no shut*	
R1(config-if)# *copy run start*	
R1(config-if)# *exit*	
R1(config)# *ip dhcp pool Development*	`Development is the name of the pool`
R1(dhcp-config)# *network 10.1.1.0 255.255.255.0*	`this is the network IP addresses will be assigned from`
`dhcp server ip MUST be on the same subnet as router IP`	

Other Misc DHCP Configuration

R1(dhcp-config)# *default-router 10.1.1.2*	`default gateway`
R1(dhcp-config)# *dns-server 10.1.1.2*	`this will normally be another server on your network`
R1(config-if)# *lease 7*	`choices are number of days or infinite`
R1(dhcp-config)# *ip dhcp excluded-address*	`` `this can be a range i.e. 10.1.1.5 10.1.1.11 ``
R1(dhcp-config)# *domain-name google.com*	
R1(config-if)# *option XX*	
10.1.1.2 `static assignment`	
R1(dhcp-config)# *exit*	
ip dhcp helper-address	
ip helper-address 192.168.1.245 [ip address of dhcp server] - ids the dhcp router and allows broadcast UDP traffic for dhcp assignment	
int f0/0	
ip helper-address 192.168.2.245	

Verify DHCP

R1(config-dhcp)# *show ip pool*	
R1(config-dhcp)# *show ip lease*	
R1(config-dhcp)# *show ip binding*	`allocated addresses`

NAT

ip nat pool name [first IP] [last IP] net [subnet mask]	defines the pool of public addresses to use
ip nat inside source list [acl#] pool name overload	enables PAT & specifies which ACL is being translated to which NAT pool
ip nat inside	identifies inside interface (int config)
ip nat out	ip nat outside
ip nat in s st 192.168.1.10 209.165.200.18	configures static NAT mapping
sh ip nat s	show ip nat statistics
show ip nat statistics	show ip nat translations

Configure DHCP Client

R1> *enable*	
R1# *configure terminal*	
R1(config)# *int f0/0*	
R1(config)# *mac-address aaaa.bbbb.cccc*	
R1(config)# *ip address dhcp*	
R1(dhcp-config)# *domain-name*	
R1(config)# *no shut*	
R1(config-if)# *ip dhcp cllient-id ascii PC2*	`allows a user friendly id to be assigned to a host`
R1# *show dhcp lease*	displays leasing information