

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 10.1.1.11
`this can be a range i.e. 10.1.1.5
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 client-id ascii PC2
allows a user friendly id to be assigned to a host
R1# show dhcp lease
displays leasing information
```

