

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 10.1.1.11
R1(dhcp-config)# domain-name ats.coop
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
```

