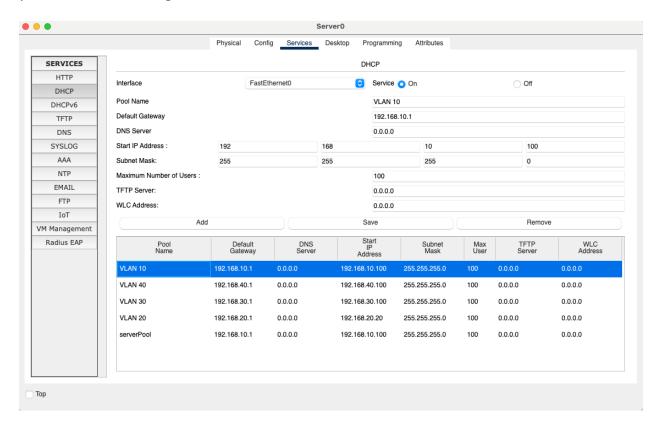
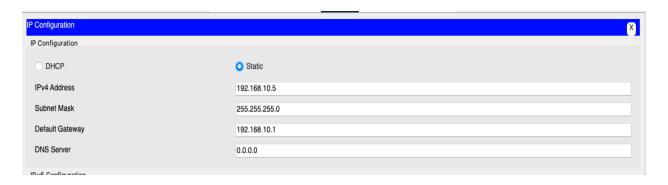
## Adding a DHCP Server to the WAN

1. Begin by setting all your DHCP Scopes on the DHCP Server. Name each one according to your VLAN. The starting address will be 192.168.x.100/24



2. Assign your server an IP address on VLAN 10 we will use 192.168.10.5.



3. Connect your server to the switch on Interface 23. Set this Interface to be an access port and have it access VLAN 10.

```
!
interface FastEthernet0/24
switchport access vlan 10
switchport mode access
!
```

4. The final set is to set up IP Helper-Address on the Routers that will all point to the DHCP Server 192.168.10.5. You will set this up on each of the sub-interfaces for each VLAN. This way, when the Broadcast traffic comes to the Default gateway looking for an IP Address from a DHCP Server, it will know where to get an assigned address.

```
interface GigabitEthernet0/0.10
encapsulation dot1Q 10
ip address 192.168.10.1 255.255.255.0
ip helper-address 192.168.10.5
!
interface GigabitEthernet0/0.20
encapsulation dot1Q 20
ip address 192.168.20.1 255.255.255.0
ip helper-address 192.168.10.5
!
```

5. Go to each of your computers on both sides of the WAN. Open the IP Settings and set it from Static to DHCP. Ensure you are receiving the correct VLAN Address. Ping each machine and ensure the connections are working.