DHCP short notes and Configuration on Multilayer switch

When a computer connected to a Domain having DHCP server it will requests an IP address,Below steps will happen between the requested client and DHCP server

• **DHCP Discover**
• **DHCP Offer**
• **DHCP Request**
• **DHCP Acknowledgement**

The computer sends an **DHCP Discover** because it's looking for an IP address. This message is broadcasted within the VLAN. The DHCP server will reply with the **DHCP Offer** message, this contains all the information the computer needs. The computer will reply with a **DHCP request** because it likes what it sees. The final step is a **DHCP Acknowledgement** from the DHCP server.

Configuration to use multilayer switch as DHCP server

Switch(config)#interface vlan 15
Switch(config-if)#ip address 192.168.11.254 255.255.255.0
Switch(config)#interface fa0/1
Switch(config-if)#switchport access vlan 15

First create the SVI, put an IP address on it and make sure Computer is in VLAN 15.You can also use a routed port if you like instead of SVI

Switch(config)#ip dhcp pool SYSNETNOTES
Switch(dhcp-config)#network 192.168.11.0 255.255.255.0
Switch(dhcp-config)#default-route 192.168.11.254
Switch(config)#ip dhcp excluded-address 192.168.11.254

Above is a simple example of a DHCP pool. You can pick any name you like for the pool.Type in the network and that's it. I've also added a gateway with the default-routecommand. Optionally you can exclude a number of IP addresses

Switch#show ip dhcp binding

NOTE : if the DHCP server is not on the same VLAN, We can use the "ip helper" command