[DHCP](http://shabbathster.blogspot.com/2013/09/dhcp.html)

                         ISC - Dynamic Host Config Protocol  
                        [International Software Consortium]  
  
                                    Server  
                                    ------  
  
Make sure the date and time are set properly :  
  
  
   # timeconfig                        -- Set your TIMEZONE  
  
   # date 081811002007 [mmddhhmmyyyy]  -- To set the Linux clock to 11th Aug 2007 11AM  
  
   # hwclock --hctosys                 -- To set the Linux [system] clock from the HW clock  
    
   # hwclock --utc systohc             -- To set the HW clock from the Linux [system] clock  
  
  
1. Configure /etc/dhcpd.conf -  
                  Does not exist by default  
   Copy sample from the DHCP documentation.  
                  [ i.e Do this : # cp dhcpd.conf.sample /etc/dhcpd.conf ]  
                  Delete everyting in it and keep this much  
  
   Now your new /etc/dhcpd.conf should look like this :  
  
   /etc/dhcpd.conf  
   ================  
   ddns-update-style interim;  
   ignore client-updates;  
     
    subnet 192.168.0.0 netmask 255.255.255.0  
    {  
     
      # The range of IP addrs the server will issue to DHCP enabled PC clients  
      # booting up on the network  
     
        range 192.168.0.100 192.168.0.120;     
  
      # Set the amount of time in seconds that a client may keep the IP address  
       
 default-lease-time 21600;  
 max-lease-time 43200;  
  
      # Set the default Gateway to be used by the PC clients  
      # This put the word --> GATEWAY=192.168.0.1 in ../ifcfg-eth0  
  
        option routers 192.168.0.1;  
  
      # Don't forward DHCP requests from this NIC interface to any other NIC  
      # interfaces  
      # Put this on if you have multiple NICs  
  
        option ip-forwarding off;  
  
      # Set the broadcast address and subnet mask to be used by the DHCP clients  
  
        option broadcast-address 192.168.0.255;  
 option subnet-mask 255.255.255.0;  
  
      # Set the DNS server to be used by the DHCP clients  
      # This puts the word --> nameserver=192.168.0.100 in /etc/resolv.conf  
  
        option domain-name-servers 192.168.0.100;  
  
      # If you specify a WINS server for your Windows clients, include this :  
   
        option netbios-name-servers 192.168.1.100;  
  
      # You can also assign specific IP addresses based on the clients'  
        ethernet MAC address as follows (Host's name is "laser-printer")  
         
 host laser-printer  
 {  
   hardware ethernet 08:00:2b:4c:59:23;  
   fixed-address 192.168.0.222;  
 }  
    }  
  
2. touch /var/lib/dhcp/dhcpd.leases   or else DHCP server will NEVER start  
                                      and not required from RH7.2 onwards  
       bcos it already exists  
3. service dhcpd start  
  
   When a DHCP configured PC boots, it requests its IP addrs from the DHCP  
   server.  
   It does this by sending a standardized DHCP broadcast request packet to the  
   DHCP server with a source IP address of 255.255.255.255.  
  
Note : Automatic Private IP Addressing (APIPA) and  169.254.0.0 network of  
       Win Clients  
  
  
Testing :  
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4. dhcpd -f  - whether DHCP server is up and running  
5. dhcpd -T  - if dhcpd.leases is OK  
6. dhcpd -t  - if dhcpd.conf syntax is OK  
  
See man dhcp-options  
  
WatchOut :  
         After adding my 2nd network card, I noticed dhcpd wasn't working anymore.  
   
         If more than one network card resides in the DHCP server, it is recommended to specify which  
  interface(s) the DHCP server will use.  
   
  Do this :  
   
  /etc/sysconfig/dhcpd  
  ====================  
         DHCPDARGS=eth0  
      
         The dhcpd server loads without problem after adding this entry.  
  
  
                                    Client  
                                    ------  
  
1. /etc/sysconfig/network-scripts/ifcfg-eth0    Change static to dhcp  
    or  
    use netconfig  
  
2. reboot or service network restart or even better "ifdown/ifup eth0"  
  
What all can a DHCP server provide Clients ?  
  
1. IP                  - range  
2. netmask             - option subnet-mask  
3. BC                  -   
4. nameserver          - 'option domain-name-servers'  
5. domain              - 'option domain-name'  
6. NIS domain          - 'option nis-domain-name'  
6. MAC addr-based IP   - 'hardware ethernet' and 'fixed-address'  
7. default lease time  - 'default-lease-time'  
8. max lease time      - 'max-lease-time'  
9  gateway             - 'option routers'  
   For netbios/Samba      option netbios-node-type 2  
                          option netbios-name-server  
  
Advantages of DHCP :  
  
1. Easy configuration if many many clients  
2. Saves IPs  
2. fixed IP for certain clients  
3. Automatic config of the above 9 points  
  
Disadvantages :  
  
1. Not even one  
  
ddns-update-style interim;  
ignore client-updates;  
  
# --- Selects point-to-point node (default is hybrid). Don't change this unless  
# -- you understand Netbios very well  
  
  
  
                      \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*