What does “dynamic host configuration” mean?

- dynamic: automatic
- host: a network-attached computer
- configuration: the non-physical (software) settings required for network participation, mainly an address
DHCP is client-server

- client - requests an address and network info, via broadcast
- server - dispenses addresses in response from a pool, reclaims and recycles them after an expiry period

DHCP client software

- dhcpcd, or
- pump, or
- dhclient, or
Client: address acquisition on interface eth0

- manual
  - pump -i eth0 (or dhclient eth0, or other client…)
- automatic
  - /etc/sysconfig/network-scripts/ifcfg-eth0
    - ONBOOT=yes
    - BOOTPROTO= dhcp
- confirmation
  - ifconfig eth0

DHCP server software

- dhcpd
- /etc/dhcp/dhcpd.conf - configuration file
- to turn it on:
  - /etc/rc.d/init.d/dhcpd start, or equivalently service dhcpd start; or
  - systemctl start dhcpd
- to turn it off:
  - /etc/rc.d/init.d/dhcpd stop, or equivalently service dhcpd stop
**dhcpd.conf - set address pool**

Subnet 192.168.3.0 netmask 255.255.255.0 {
    range 192.168.3.10 192.168.3.100;
    range 192.168.3.110 192.168.3.200;
}

**dhcpd.conf - fixed address**

host micron {
    hardware ethernet 08:00:2b:4c:59:23;
    fixed-address 192.168.3.101
}

dhcpd.conf - other hosts

option routers 192.168.3.254;
option domain-name-servers 192.168.3.1 192.168.3.2;

dhcpd.conf - other info

option domain-name "mydomain.org";
default-lease-time 600;
max-lease-time 7200;
Rental agreement -

/var/lib/dhcp/dhcpd.leases

lease 207.168.7.50 {
    starts 5 2000/08/18 04:49:52;
    ends 5 2000/08/18 16:49:52;
    hardware ethernet 00:80:c8:e2:af:61;
    uid 01:00:80:c8:e2:af:61;
    client-hostname "MICRON";
}