

## Services:

# DHCP - dynamic host configuration protocol

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## 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

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## 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

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## DHCP client software

- dhcpcd, or
- pump, or
- dhclient, or

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## 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`

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## DHCP server software

- `dhcpcd`
- `/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`;

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## dhcpcd.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;  
}
```

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## dhcpcd.conf - fixed address

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

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## dhcpcd.conf - other hosts

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

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## dhcpcd.conf - other info

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

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# 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";}
```

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