# How to install and configure isc-dhcp-server

Note

Although Ubuntu still supports isc-dhcp-server, this software is no longer supported by its vendor. It has been replaced by Kea.

In this guide we show how to install and configure isc-dhcp-server, which installs the dynamic host configuration protocol daemon, DHCPD. For isc-kea instructions, refer to this guide instead.

# Install isc-dhcp-server

At a terminal prompt, enter the following command to install isc-dhcp-server:

```
sudo apt install isc-dhcp-server
```

Note

You can find diagnostic messages from dhcpd in syslog.

# Configure isc-dhcp-server

You will probably need to change the default configuration by editing /etc/dhcp/dhcpd.conf to suit your needs and particular configuration.

Most commonly, what you want to do is assign an IP address randomly. This can be done with /etc/dhcp/dhcpd.conf settings as follows:

```
# minimal sample /etc/dhcp/dhcpd.conf
default-lease-time 600;
max-lease-time 7200;

subnet 192.168.1.0 netmask 255.255.255.0 {
 range 192.168.1.150 192.168.1.200;
 option routers 192.168.1.254;
 option domain-name-servers 192.168.1.1, 192.168.1.2;
 option domain-name "mydomain.example";
}
```

This will result in the DHCP server giving clients an IP address from the range 192.168.1.150 - 192.168.1.200. It will lease an IP address for 600 seconds if the client doesn't ask for a specific time frame. Otherwise the maximum (allowed) lease will be 7200 seconds. The server will also "advise" the client to use 192.168.1.254 as the default-gateway and 192.168.1.1 and 192.168.1.2 as its DNS servers.

You also may need to edit /etc/default/isc-dhcp-server to specify the interfaces dhcpd should listen to.

In the example below, eth4 is used, but you should replace this with the appropriate interface for your system. The name of the network interface can vary depending on your setup. For instance, it could be eth0, ens33, or any other name depending on the device you're using.

```
INTERFACESv4="eth4"
```

After changing the config files you need to restart the dhcpd service:

```
sudo systemctl restart isc-dhcp-server.service
```

The ISC DHCP includes support for IPv6 (DHCPv6) since the 4.x release with a DHCPv6 server, client, and relay agent functionality. The agents support both IPv4 and IPv6, however the agents can only manage one protocol at a time; for dual support they must be started separately for IPv4 and IPv6. For example, configure both DHCPv4 and DHCPv6 by editing their respective configuration files /etc/dhcp/dhcpd.conf and /etc/dhcp/dhcpd6.conf and then issue the following commands:

```
~]# systemctl start dhcpd
~]# systemctl start dhcpd6
```

The DHCPv6 server configuration file can be found at /etc/dhcp/dhcpd6.conf.
The example server configuration file can be found at /usr/share/doc/dhcp-*version*/dhcpd6.conf.example.
A simple DHCPv6 server configuration file can look like this:

```
subnet6 2001:db8:0:1::/64 {
      range6 2001:db8:0:1::129 2001:db8:0:1::254;
      option dhcp6.name-servers fec0:0:0:1::1;
      option dhcp6.domain-search "domain.example";
}
```

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To assign a fixed-address to a client, based on the MAC address of the network interface card, use the hardware ethernet parameter:

```
host otherclient {
      hardware ethernet 01:00:80:a2:55:67;
      fixed-address6 3ffe:501:ffff:100::4321;
}
```

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The configuration options in the shared-network, and group declaration for IPv6 are the same as IPV4.