DHCP动态管理主机地址

1 部署DHCP

2 分配固定IP地址

部署DHCP

安装dhcp服务

```
[root@localhost ~]# yum -y install dhcp
```

查看dhcpd服务配置文件

```
[root@localhost ~]# cat /etc/dhcp/dhcpd.conf
#
# DHCP Server Configuration file.
#   see /usr/share/doc/dhcp*/dhcpd.conf.example
#   see dhcpd.conf(5) man page
#
[root@localhost ~]#
```

查看参考示例

```
cat /usr/share/doc/dhcp*/dhcpd.conf.example | grep -v "^$" | grep -v "#"
```

参数	作用
ddns-update-style [类型]	定义DNS服务动态更新的类型，类型包括none（不支持动态更新）、interim（互动更新模式）与ad-hoc（特殊更新模式）
[allow | ignore] client-updates	允许/忽略客户端更新DNS记录
default-lease-time [21600]	默认超时时间
max-lease-time [43200]	最大超时时间
option domain-name-servers [8.8.8.8]	定义DNS服务器地址
option domain-name ["domain.org"]	定义DNS域名
range	定义用于分配的IP地址池
option subnet-mask	定义客户端的子网掩码
option routers	定义客户端的网关地址
broadcase-address[广播地址]	定义客户端的广播地址
ntp-server[IP地址]	定义客户端的网络时间服务器（NTP）
nis-servers[IP地址]	定义客户端的NIS域服务器的地址
Hardware[网卡物理地址]	指定网卡接口的类型与MAC地址
server-name[主机名]	向DHCP客户端通知DHCP服务器的主机名
fixed-address[IP地址]	将某个固定的IP地址分配给指定主机
time-offset[偏移误差]	指定客户端与格林尼治时间的偏移差

修改dhcp配置文件，给windows分配IP地址

```
[root@localhost ~]# vi /etc/dhcp/dhcpd.conf
#
# DHCP Server Configuration file.
#   see /usr/share/doc/dhcp*/dhcpd.conf.example
#   see dhcpd.conf(5) man page
#
ddns-update-style none;
ignore client-updates;
subnet 192.168.1.0 netmask 255.255.255.0 {
range 192.168.1.50 192.168.1.150;
option subnet-mask 255.255.255.0;
option routers 192.168.1.1;
option domain-name "test.com";
option domain-name-servers 192.168.1.1;
default-lease-time 21600;
max-lease-time 43200;
}
[root@localhost ~]#
```

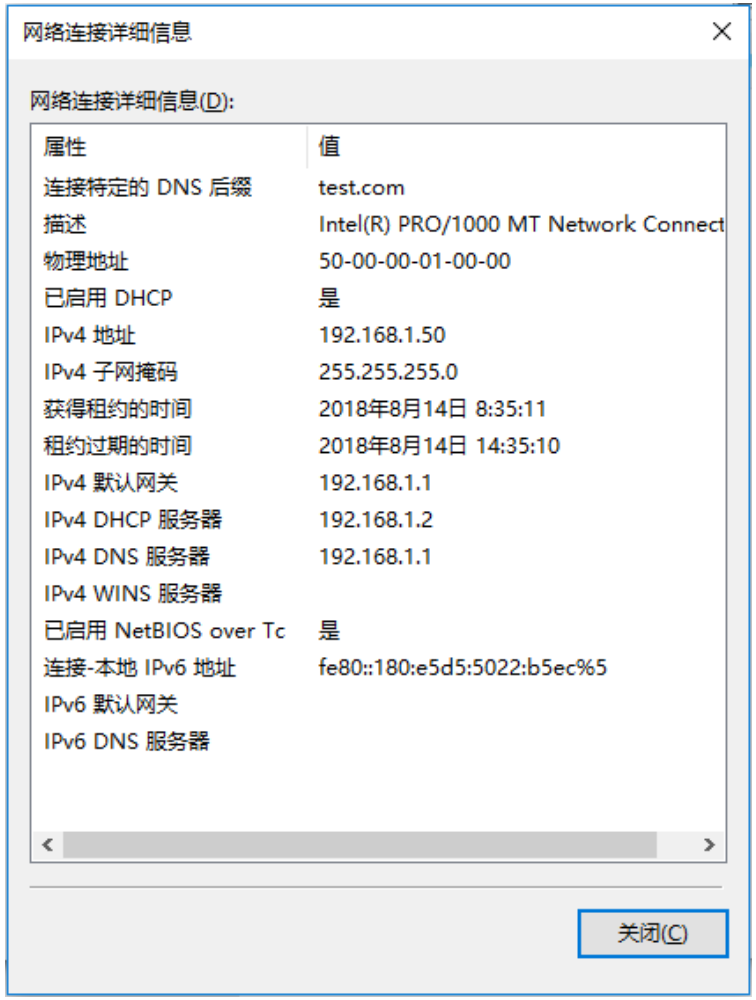
配置文件参数

参数	作用
ddns-update-style none;	设置DNS服务不自动进行动态更新
ignore client-updates;	忽略客户端更新DNS记录
subnet 192.168.1.0 netmask 255.255. 255.0 {	作用域为192.168.1.0/24网段
range 192.168.1.50 192.168.1.150;	IP地址池为192.168.1.50-150（约100个IP地址）
option subnet-mask 255.255.255.0;	定义客户端默认的子网掩码
option routers 192.168.1.1;	定义客户端的网关地址
option domain-name "test.com";	定义默认的搜索域
option domain-name-servers 192.168. 1.1;	定义客户端的DNS地址
default-lease-time 21600;	定义默认租约时间（单位：秒）
max-lease-time 43200;	定义最大预约时间（单位：秒）
}	结束符

设置开机启动

```
[root@localhost ~]# systemctl start dhcpd
[root@localhost ~]# systemctl enable dhcpd
Created symlink from /etc/systemd/system/multi-user.target.wants/dhcpd.service
to /usr/lib/systemd/system/dhcpd.service.
```

查看客户端是否获得IP地址



分配固定IP地址

按照如下格式将IP地址与MAC地址进行绑定

```
host主机名称 {
          hardware  ethernet  该主机的mac地址;
          fixed-address  指定的IP地址;
}
```

查看客户端MAC地址

```
[root@localhost ~]# systemctl enable dhcpd
Created symlink from /etc/systemd/system/multi-user.target.wants/dhcpd.service
to /usr/lib/systemd/system/dhcpd.service.
[root@localhost ~]# tail -f /var/log/messages
Aug 14 04:28:23 localhost dhcpd: Wrote 0 leases to leases file.
Aug 14 04:28:23 localhost dhcpd: Listening on
LPF/eth0/00:50:00:00:02:00/192.168.1.0/24
Aug 14 04:28:23 localhost dhcpd: Sending on
LPF/eth0/00:50:00:00:02:00/192.168.1.0/24
Aug 14 04:28:23 localhost dhcpd: Sending on   Socket/fallback/fallback-net
Aug 14 04:28:23 localhost systemd: Started DHCPv4 Server Daemon.
Aug 14 04:28:30 localhost systemd: Reloading.
Aug 14 04:30:04 localhost dhcpd: DHCPDISCOVER from 50:00:00:01:00:00 via eth0
Aug 14 04:30:05 localhost dhcpd: DHCPOFFER on 192.168.1.50 to 50:00:00:01:00:00
(DESKTOP-MU21D5B) via eth0
Aug 14 04:30:05 localhost dhcpd: DHCPREQUEST for 192.168.1.50 (192.168.1.2) from
50:00:00:01:00:00 (DESKTOP-MU21D5B) via eth0
Aug 14 04:30:05 localhost dhcpd: DHCPACK on 192.168.1.50 to 50:00:00:01:00:00
(DESKTOP-MU21D5B) via eth0
```

修改配置文件

```
[root@localhost ~]# vi /etc/dhcp/dhcpd.conf
#
# DHCP Server Configuration file.
#   see /usr/share/doc/dhcp*/dhcpd.conf.example
#   see dhcpd.conf(5) man page
#
ddns-update-style none;
ignore client-updates;
subnet 192.168.1.0 netmask 255.255.255.0 {
range 192.168.1.50 192.168.1.150;
option subnet-mask 255.255.255.0;
option routers 192.168.1.1;
option domain-name "test.com";
option domain-name-servers 192.168.1.1;
default-lease-time 21600;
max-lease-time 43200;
host test {
hardware ethernet 50:00:00:01:00:00;
fixed-address 192.168.1.88;
}
}
[root@localhost ~]# systemctl restart dhcpd
```

查看客户机获得的IP地址