

# HCIA---基础网络配置----DHCP动态主机配置实验

原创

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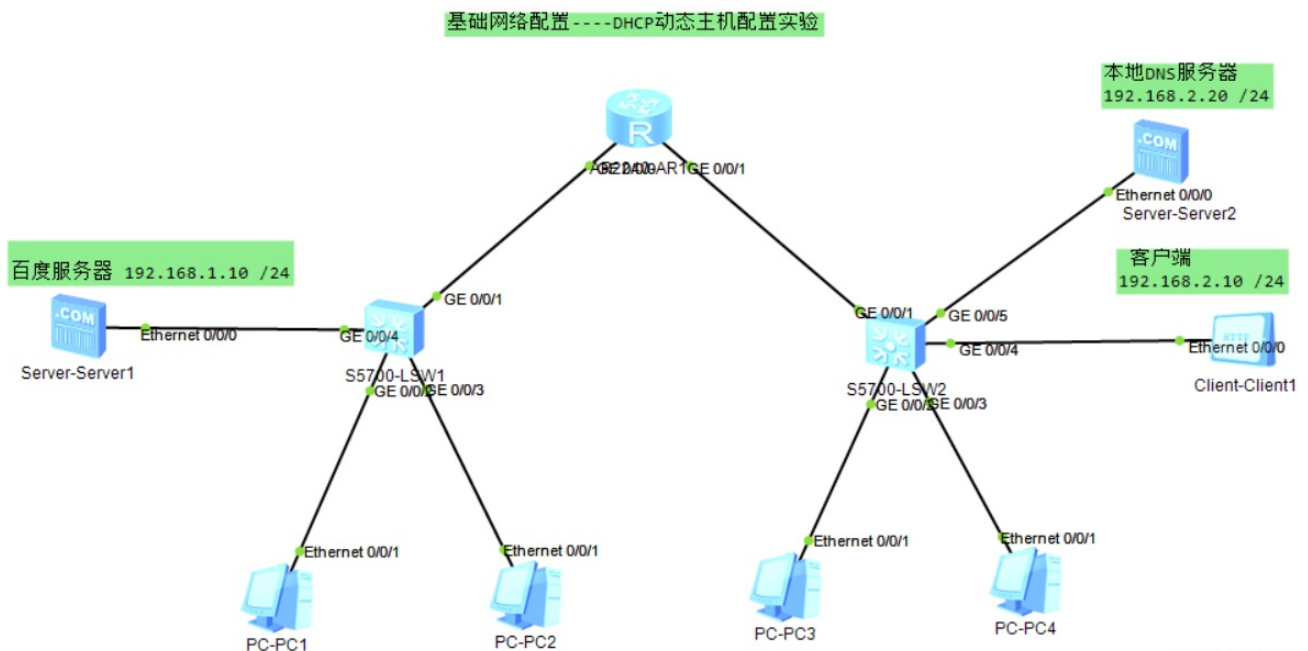
2.实验步骤

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## 前言

前三篇实验PC的IP地址都是我们自己敲命令配置上去的, 本篇我们要通过DHCP动态主机配置协议来实现主机IP地址的自动获取, 声明---本次实验拓扑是利用之前DNS服务器搭建的拓扑, 那我们应该选谁来作为DHCP服务器呢, 那下面就让我们进行实验吧!

## 1.实验拓扑



## 2.实验步骤

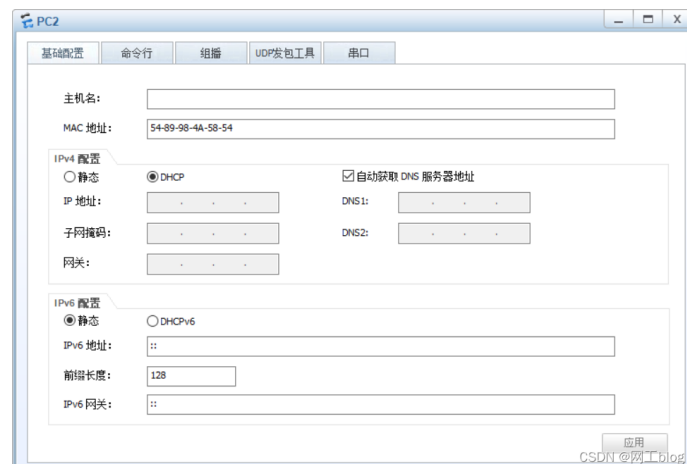
### 1.路由器AR1----配置（之前已经配置过网关了）

```
<Huawei>sys
Enter system view, return user view with Ctrl+Z.
[Huawei]dhcp en
[Huawei]dhcp enable
Info: The operation may take a few seconds. Please wait for a moment.done.
[Huawei]ip pool
[Huawei]ip pool aa
Info: It's successful to create an IP address pool.
[Huawei-ip-pool-aa]net 192.168.1.0 mask 24
[Huawei-ip-pool-aa]gat
[Huawei-ip-pool-aa]gateway-list 192.168.1.254
[Huawei-ip-pool-aa]dns
[Huawei-ip-pool-aa]dns-list 114.114.114.114 8.8.8.8
[Huawei-ip-pool-aa]q
[Huawei]ip pool
[Huawei]ip pool bb
Info: It's successful to create an IP address pool.
[Huawei-ip-pool-bb]net 192.168.2.0 mask 24
[Huawei-ip-pool-bb]gat
[Huawei-ip-pool-bb]gateway-list 192.168.2.254
[Huawei-ip-pool-bb]dns
[Huawei-ip-pool-bb]dns-list 114.114.114.114
[Huawei-ip-pool-bb]q
[Huawei]int g0/0/0
[Huawei-GigabitEthernet0/0/0]dhcp s
[Huawei-GigabitEthernet0/0/0]dhcp select g
[Huawei-GigabitEthernet0/0/0]dhcp select global
[Huawei-GigabitEthernet0/0/0]q
[Huawei]int g0/0/1
[Huawei-GigabitEthernet0/0/1]dhcp se
[Huawei-GigabitEthernet0/0/1]dhcp select g
[Huawei-GigabitEthernet0/0/1]dhcp select global
[Huawei-GigabitEthernet0/0/1]q
[Huawei]
```

→ 启动DHCP服务器  
→ 创建地址池  
→ 网段  
→ 网关  
→ DNS  
→ 接下全局选择

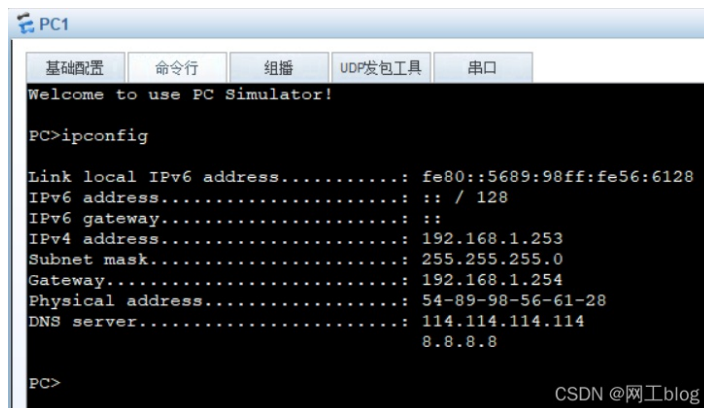
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### 2.PC配置DHCP





### 3.在PC上进行查询动态分配的IP地址



```
PC3
基础配置 命令行 组播 UDP发包工具 串口
Welcome to use PC Simulator!

PC>ipconfig

Link local IPv6 address.....: fe80::5689:98ff:fe42:28ce
IPv6 address.....: :: / 128
IPv6 gateway.....: ::
IPv4 address.....: 192.168.2.253
Subnet mask.....: 255.255.255.0
Gateway.....: 192.168.2.254
Physical address.....: 54-89-98-42-28-CE
DNS server.....: 114.114.114.114

PC>
```

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#### 4.PING测试--- PC1---ping--PC3

```
PC1
基础配置 命令行 组播 UDP发包工具 串口
Link local IPv6 address.....: fe80::5689:98ff:fe56:6128
IPv6 address.....: :: / 128
IPv6 gateway.....: ::
IPv4 address.....: 192.168.1.253
Subnet mask.....: 255.255.255.0
Gateway.....: 192.168.1.254
Physical address.....: 54-89-98-56-61-28
DNS server.....: 114.114.114.114
                  8.8.8.8

PC>ping 192.168.2.253

Ping 192.168.2.253: 32 data bytes, Press Ctrl_C to break
Request timeout!
From 192.168.2.253: bytes=32 seq=2 ttl=127 time=78 ms
From 192.168.2.253: bytes=32 seq=3 ttl=127 time=47 ms
From 192.168.2.253: bytes=32 seq=4 ttl=127 time=63 ms
From 192.168.2.253: bytes=32 seq=5 ttl=127 time=78 ms

--- 192.168.2.253 ping statistics ---
 5 packet(s) transmitted
 4 packet(s) received
20.00% packet loss
 round-trip min/avg/max = 0/66/78 ms

PC>
```

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### 3.总结

DHCP配置命令:

### 1, 启动DHCP服务器

```
[aaa]dhcp enable
```

### 2, 创建地址池

```
[aaa]ip pool aa
```

Info: It's successful to create an IP address pool.

```
[aaa-ip-pool-aa]
```

### 3, 配置地址池

```
[aaa-ip-pool-aa]network 192.168.1.0 mask 24
```

```
[aaa-ip-pool-aa]gateway-list 192.168.1.1 -- 配置网关信息
```

```
[aaa-ip-pool-aa]dns-list 114.114.114.114 8.8.8.8 --- 有配置DNS信息
```

### 4, 在接口选择全局配置

```
[aaa-GigabitEthernet0/0/0]dhcp select global
```

本次基础网络配置----DHCP动态主机配置实验，实现了通过DHCP动态获取IP地址，实验拓扑放到资源里了，我会在评论里放上链接，有需要的自行获取。