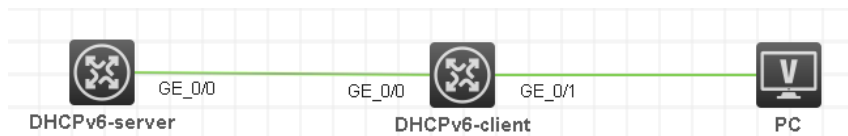


知 MSR G2设备作为DHCPv6服务器为终端分配ipv6地址前缀配置案例

IPv6 DHCP 鲁一鸣 2019-01-28 发表

组网及说明



设备都是MSR-G2 版本为V7 Release 0605P21，设备组网如图所示

需要实现需求如下：

- 1、DHCPv6 client设备GE0/0接口自动获取DHCPv6 server分配的ipv6地址
- 2、DHCPv6 client设获取DHCPv6 serve分配的地址前缀，并分配给下联终端PC

配置步骤

【DHCPv6-server】

```
#
ipv6 dhcp prefix-pool 1 prefix 2001:410::/32 assign-len 48    //创建DHCPv6前缀池
#
ipv6 dhcp pool 1        //创建DHCPv6地址池
network 1::/64
dns-server 2:2::3
domain-name aaa.com
prefix-pool 1 preferred-lifetime 86400 valid-lifetime 259200    //在地址池中引用前缀池
#
interface GigabitEthernet0/0
port link-mode route
ipv6 dhcp select server    //配置接口工作在dhcpv6服务器模式
ipv6 dhcp server allow-hint preference 255 rapid-commit
ipv6 address 1::1/64
ipv6 nd autoconfig managed-address-flag
ipv6 nd autoconfig other-flag
#
```

【DHCPv6-client】

```
#
interface GigabitEthernet0/0
port link-mode route
ipv6 address dhcp-alloc    //配置该接口自动获取ipv6地址，会获取到dhcp pool 1里的地址
ipv6 dhcp client stateful prefix 1
ipv6 dhcp client pd 1      //本条命令和上一条命令任意配一条即可，任意一条都可以获取到ipv6前缀
#
interface GigabitEthernet0/1
port link-mode route
ipv6 address 1::1/64    //获取地址前缀后，引用该前缀生成接口上的ipv6地址，并将此前缀分配给终端
undo ipv6 nd ra halt
#
```

【验证】

```
[server]display ipv6 dhcp server ip-in-use
```

```
Pool: 1
```

IPv6 address	Type	Lease expiration
1::2	Auto(C)	Jan 11 02:37:04 2019

```
[server]display ipv6 dhcp server pd-in-use
```

```
Pool: 1
```

IPv6 prefix	Type	Lease expiration
2001:410::/48	Auto(C)	Jan 14 02:37:05 2019

```
[client]display ipv6 interface brief
```

*down: administratively down

(s): spoofing

Interface	Physical	Protocol	IPv6 Address
GigabitEthernet0/0	up	up	1::2
GigabitEthernet0/1	up	up	2001:410::1

[client]display ipv6 dhcp client

GigabitEthernet0/0:

Type: Stateful client requesting address

State: OPEN

Client DUID: 00030001600b03b17952

Preferred server:

Reachable via address: FE80::4A7A:DAFF:FECD:8A6

Server DUID: 00030001487adacd08a8

IA_NA: IAID 0x00000002, T1 302400 sec, T2 483840 sec

Address: 1::2

Preferred lifetime 604800 sec, valid lifetime 2592000 sec

Will expire on Jan 31 2011 at 01:19:43 (2591950 seconds left)

DNS server addresses:

2:2::3

Domain name:

aaa.com

[client]display ipv6 prefix 1

Number: 1

Type : Dynamic

Prefix: 2001:410::/48

Preferred lifetime 86400 sec, valid lifetime 259200 sec

PC终端

网络连接详细信息(D):	
属性	值
描述	Intel(R) Ethernet Connection I
物理地址	F4-30-B9-D0-CE-48
已启用 DHCP	是
自动配置 IPv4 地址	169.254.193.44
IPv4 子网掩码	255.255.0.0
IPv4 默认网关	
IPv4 DNS 服务器	
IPv4 WINS 服务器	
已启用 NetBIOS ove...	是
IPv6 地址	2001:410::ddae:bb33:9e1b:c12c
临时 IPv6 地址	2001:410::d0d1:a80d:6ebf:a46a
连接-本地 IPv6 地址	fe80::ddae:bb33:9e1b:c12c%12
IPv6 默认网关	fe80::52da:ff:fe4c:378f%12
IPv6 DNS 服务器	fec0:0:0:ffff::1%1
	fec0:0:0:ffff::2%1
	fec0:0:0:ffff::3%1

在server上添加回程路由后，可以在终端上ping通server

[server]ipv6 route-static 2001:410:: 48 1::2

配置关键点

- 1、dhcpv6 client通过ipv6 dhcp client stateful prefix 1或ipv6 dhcp client pd 1命令获取地址前缀
- 2、dhcpv6 client连接终端PC的接口需要引用地址前缀来生成接口上的ipv6地址