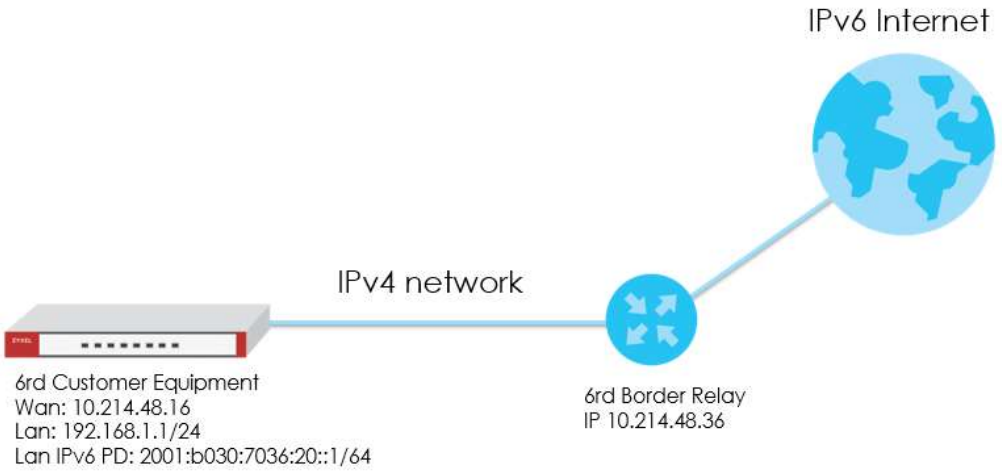
# 6rd on the WAN and autoconf on the LAN

This example shows how to configure your ATP/USG Flex's with 6rd (IPv6 rapid deployment) to access Internet IPv6. It is IPv6 in IPv4 encapsulation in order to transit IPv4-only network infrastructure.

In this scenario:

6rd CE (Customer Equipment) is 10.214.48.16

6rd BR（Border Relay） is 10.214.48.36, which is provided by ISP. The given prefix for LAN is 2001:b030:7036:20::1/64




Note:

All network IP addresses and subnet masks are used as examples in this article. Please replace them with your actual network IP addresses and subnet masks. This example was tested using ATP/USG Flex (Firmware Version: 5.00)

## Setting Up the IPv6 tunnel for 6rd scenario

### Tunnel

1. In the Configuration > Network > Interface > tunnel Configuration section, click Add to create a tunnel.
2. Fill in following information for tunnel setting in this scenario.

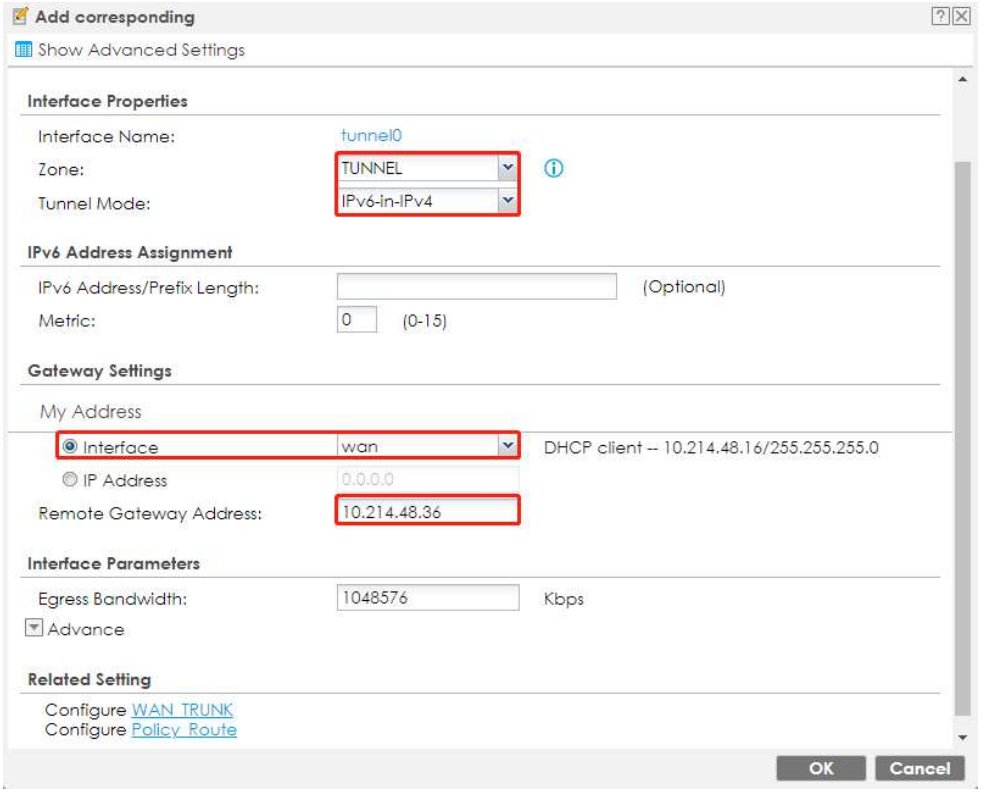
   Interface name: Tunnel0

   Zone: Tunnel

   Tunnel mode: IPv6-in-IPv4

   My address: Wan interface

   Remote Gateway address : 10.214.48.36 （Border Relay）



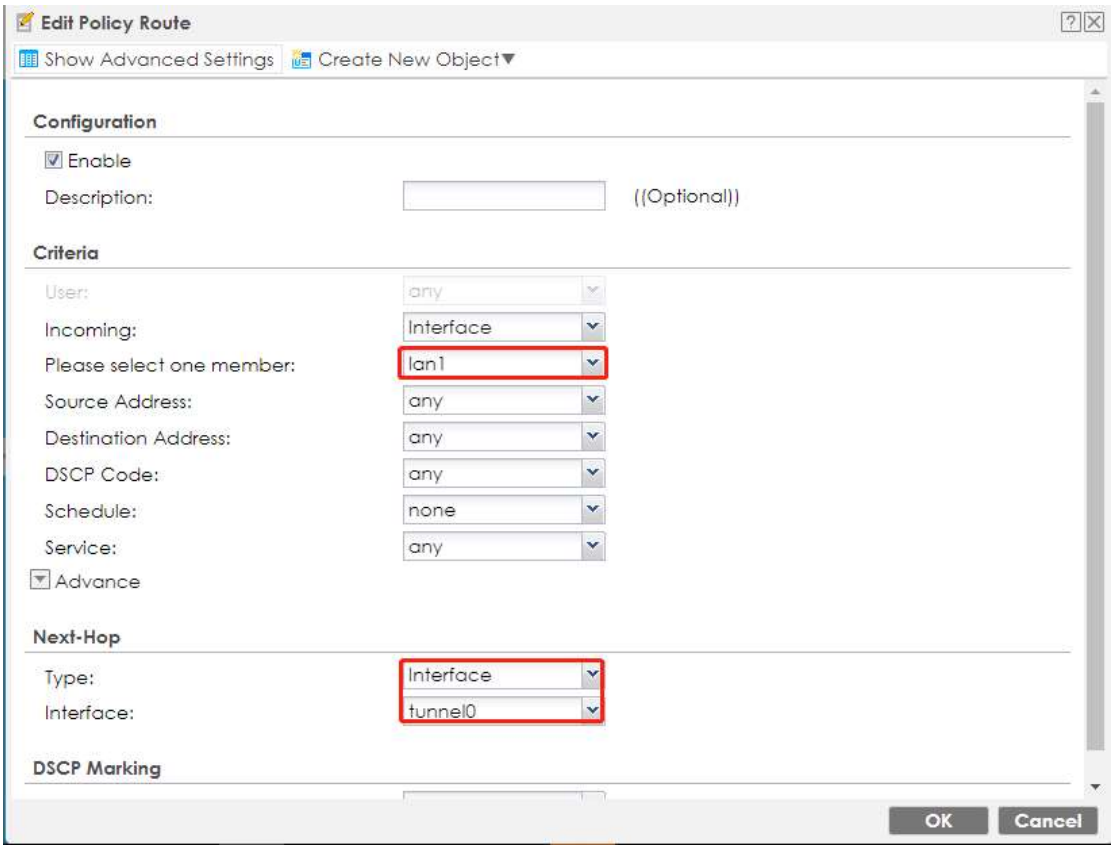
**Policy route**

1. Go to Configuration > Network > Routing > Policy route. click Add to create a policy route for V6 routing.

   Incoming interface: lan1

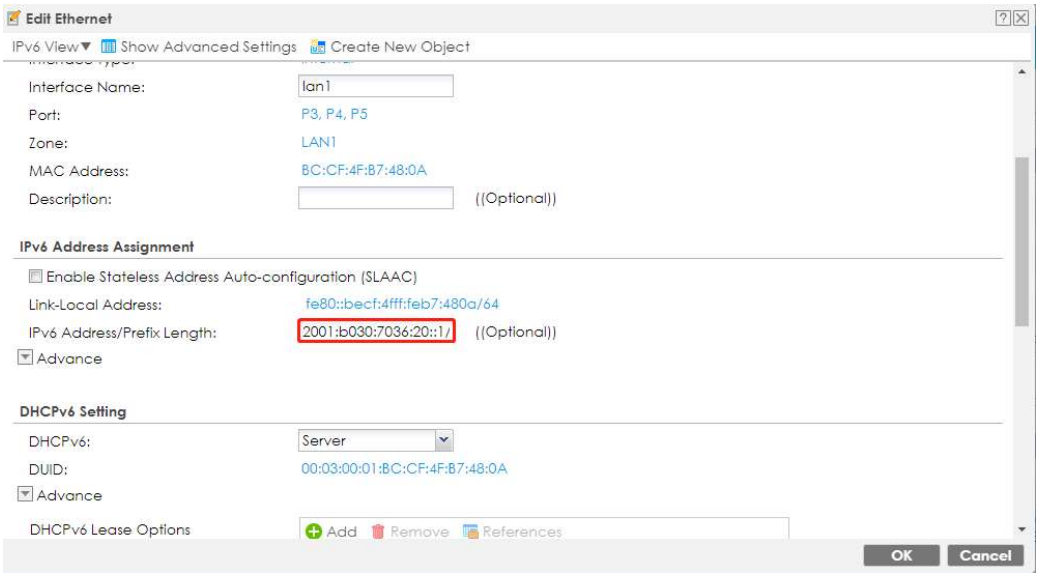
   Destination Address: any

   Next hop: Tunnel0



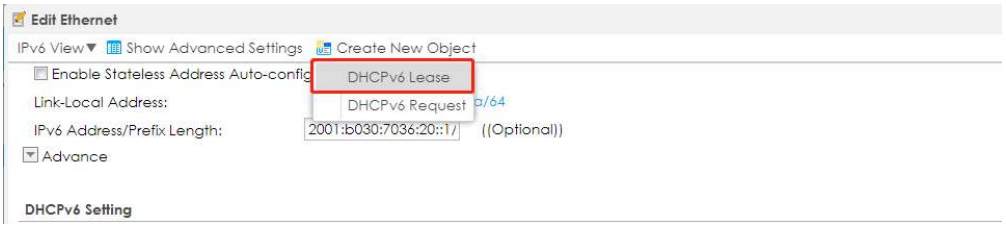
## Lan

1. In the Configuration > Network > Interface > Ethernet Configuration section, double-click the LAN interface you want to modify.
2. LAN interface IPv6 address is 2001:b030:7036:20::1/64

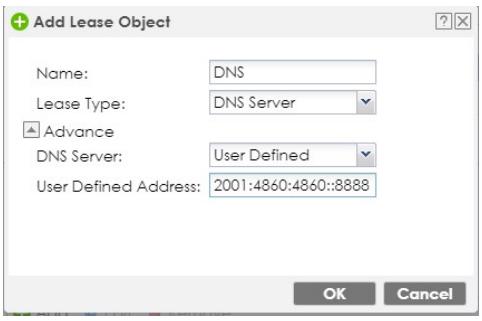



3. Enable IPv6 DHCP server.

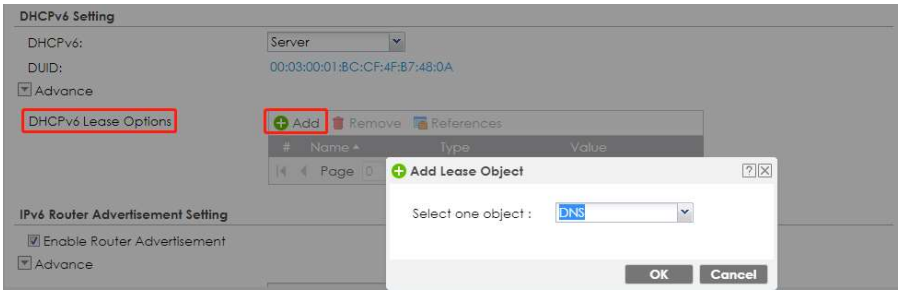

4. Add DHCP release object for LAN DNS setting.
   Create New Object > DHCPv6 Lease



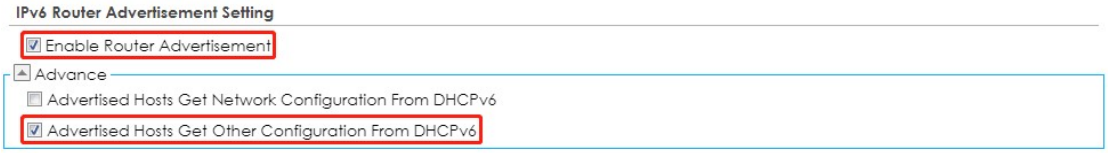

   In this scenario, we use Google V6 DNS server for LAN client. Click OK to save.



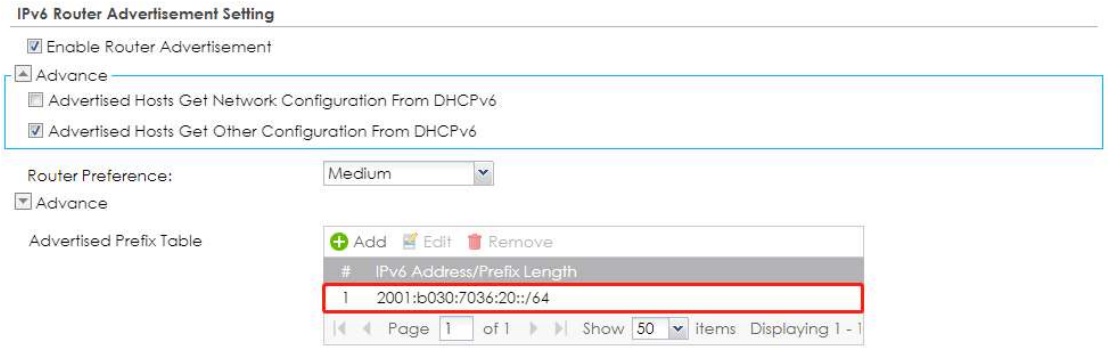
Add this Lease object in DHCPv6 Lease options.




**5.** Tick "Enable Router Advertisement", and "Advertised Hosts Get Other Configuration From DHCPv6".




**6.** Set up Advertised Prefix from DHCPv6 Prefix Delegation. In this scenario, we set 2001:b030:7036:20::/64 for LAN prefix.



## Test Result

Client IPv6 address.

```
C:\Windows\System32>ipconfig

Windows IP Configuration


Ethernet adapter 乙太網路:

   Connection-specific DNS Suffix  . :
   IPv6 Address. . . . . . . . . . . : 2001:b030:7036:20:79f1:f86:21e0:c44d
   Temporary IPv6 Address. . . . . . : 2001:b030:7036:20:2c2e:ae4c:4082:2188
   Link-local IPv6 Address . . . . . : fe80::79f1:f86:21e0:c44d%4
   IPv4 Address. . . . . . . . . . . : 192.168.1.34
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . : fe80::becf:4fff:feb7:480a%4
                                       192.168.1.1
```

Ping to Google web site.

```
C:\Windows\System32>ping www.google.com.tw

Pinging www.google.com.tw [2404:6800:4008:802::2003] with 32 bytes of data:
Reply from 2404:6800:4008:802::2003: time=10ms
Reply from 2404:6800:4008:802::2003: time=8ms
Reply from 2404:6800:4008:802::2003: time=9ms
Reply from 2404:6800:4008:802::2003: time=12ms

Ping statistics for 2404:6800:4008:802::2003:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 8ms, Maximum = 12ms, Average = 9ms
```

Test Your IPv6 connection.