

DHCPv6 with prefix delegation on the WAN and DHCPv6 on the LAN

This example shows how to configure your ATP/USG Flex's WAN as DHCPv6 with prefix delegation and LAN interface as DHCPv6.

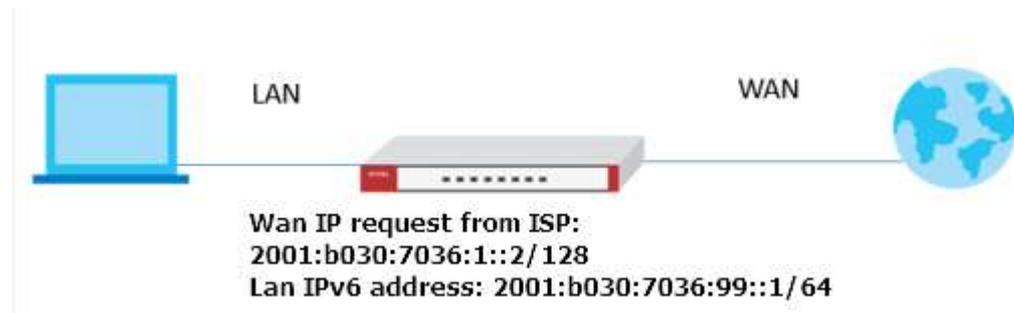
In this scenario :

Device's wan request IPv6 Address from ISP.

Request result:

DHCP -- 2001:b030:7036:1::2/128

LAN Subnet Set as **2001:b030:7036:99::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)

Configure on the Wan IPv6 interface

In the Configuration > Ethernet > IPv6 Configuration section, double-click the WAN interface you want to modify.

Choose IPv6 View, Enable Interface and Enable IPv6. In IPv6 Address Assignment text box, enable Stateless Address Auto-configuration (SLAAC)

The screenshot shows the 'Edit Ethernet' configuration window for a WAN IPv6 interface. The window has a title bar with 'Edit Ethernet' and a toolbar with 'IPv6 View', 'Hide Advanced Settings', and 'Create New Object'. The configuration is organized into several sections:

- General Settings:** Contains a checked checkbox for 'Enable Interface'.
- General IPv6 Setting:** Contains a checked checkbox for 'Enable IPv6' with an information icon.
- Interface Properties:** A table-like section with the following values:
 - Interface Type: external
 - Interface Name: wan1
 - Port: P2
 - Zone: WAN
 - MAC Address: BC:99:11:80:2B:E3
 - Description: (Optional)
- IPv6 Address Assignment:** Contains a checked checkbox for 'Enable Stateless Address Auto-configuration (SLAAC)'. Below it, the 'Link-Local Address' is set to fe80::be99:11ff:feb0:2be3/64. The 'IPv6 Address/Prefix Length' field is empty and marked as '(Optional)'. Below this is an 'Advance' section with a collapse icon, containing:
 - 'Gateway' field, empty, marked as '(Optional)'
 - 'Metric' field, empty, with '(0-15)' next to it.

On DHCPv6, select **Client**, then Enable **DUID as MAC**, and tick **Request Address**
Next, create PD on DHCPv6 Request Options, and PD's Value:

2001:b030:7036:99::/64

DHCPv6 Setting

DHCPv6: Client

DUID: 00:03:00:01:BC:99:11:80:2B:E3

Advance

DUID as MAC

Customized DUID:

Enable Rapid Commit

Request Address

DHCPv6 Request Options

+ Add Remove References

#	Name	Type	Value
1	PD	Prefix Delegation	2001:b030:7036:99::/64

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IPv6 Router Advertisement Setting

Enable Router Advertisement

Advance

Advertised Hosts Get Network Configuration From DHCPv6

Advertised Hosts Get Other Configuration From DHCPv6

Configure on the Lan IPv6 interface

Tick Enable IPv6, then fill IPv6 address which provide from ISP:

Select **Server** as DHCPv6. Enable **DUID as MAC**.

Enable IPv6 i

Interface Properties

Interface Type: internal

Interface Name: lan1

Port: P4, P5, P6

Zone: LAN1

MAC Address: BC:99:11:80:2B:E5

Description: ((Optional))

IPv6 Address Assignment

Enable Stateless Address Auto-configuration (SLAAC)

Link-Local Address: fe80::be99:11ff:feb0:2be5/64

IPv6 Address/Prefix Length: ((Optional))

Advance

DHCPv6 Setting

DHCPv6: Server

DUID: 00:03:00:01:BC:99:11:80:2B:E5

Advance

DUID as MAC

Next, On the DHCPv6 Lease Options, add **2001:4860:4860::8888** as DNS server
 Add the **2001:b030:7036:99::10-2001:b030:7036:99::100** as Address Pool

+ Add corresponding ? X

Name:

Lease Type:

Interface:

DNS Server:

User Defined Address:

OK **Cancel**

On Address from DHCPv6 Prefix Delegation, fill **::1/64** as PD.

Enable **Router Advertisement** then enable **Advertised Hosts Get Network Configuration From DHCPv6** and enable **Advertised Hosts Get Other Configuration From DHCPv6**

Note: After Save the below configuration on Lan, the **Address** on On Address from DHCPv6 Prefix Delegation will be generated automatically.

Address from DHCPv6 Prefix Delegation

#	Delegated Prefix	Suffix Address	Address
1	PD	::1/64	2001:b030:7036:9...

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DHCPv6 Setting

DHCPv6:

DUID: 00:03:00:01:BC:99:11:80:2B:E5

Advance

DUID as MAC

Customized DUID:

Enable Rapid Commit

Information Refresh Time: (600-4294967295 seconds)

DHCPv6 Lease Options:

#	Name +	Type	Value
1	DNS_1	DNS Server	2001:4860:4860::88...
2	Pool	Address Pool	2001:b030:7036:99...

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IPv6 Router Advertisement Setting

Enable Router Advertisement

Advance

Advertised Hosts Get Network Configuration From DHCPv6

Advertised Hosts Get Other Configuration From DHCPv6

Test Result

[Test IPv6](#) [FAQ](#) [Mirrors](#)

Test your IPv6 connectivity.

[Summary](#) [Tests Run](#) [Share Results / Contact](#) [Other IPv6 Sites](#)

-  Your IPv4 address on the public Internet appears to be 61.222.75.14
-  Your IPv6 address on the public Internet appears to be 2001:b030:7036:99::11
-  Your Internet Service Provider (ISP) appears to be HINET Data Communication Business Group
-  Since you have IPv6, we are including a tab that shows how well you can reach other IPv6 sites. [\[more info\]](#)
-  HTTPS support on this web site is in **beta**. [\[more info\]](#)
-  Your DNS server (possibly run by your ISP) appears to have IPv6 Internet access.

Your readiness score

10/10

for your IPv6 stability and readiness, when publishers are forced to go IPv6 only

[Click to see Test Data](#)

(Updated server side IPv6 readiness stats)

```
Connection-specific DNS Suffix . :  
IPv6 Address. . . . . : 2001:b030:7036:99::11  
Link-local IPv6 Address . . . . . : fe80::54bd:62ba:463b:24a3%9  
IPv4 Address. . . . . : 192.168.1.34  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : fe80::be99:11ff:feb0:2be5%9  
192.168.1.1
```