

DHCPv6 without prefix delegation on the WAN and autoconf on the LAN

This example shows how to configure your ATP/USG Flex's WAN as DHCPv6 without prefix delegation and LAN interface as auto-configuration.

In this scenario:

ISP's IPv6 Address is 2001:b030:7036:1::/64

ISP Provided 2001:b030:7036:1:becf:4fff:fec9:9f04 IPv6 IP Address.

DNS Server Set as 2001:4860:4860::8888

LAN Subnet Set as 2001:b030:7036:5::/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 Interfaces

Wan

1. In the Configuration > Ethernet > IPv6 Configuration section, double-click the WAN interface you want to modify.
2. 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 the WAN interface. The 'IPv6 View' tab is selected. The 'General IPv6 Setting' section has the 'Enable IPv6' checkbox checked. The 'IPv6 Address Assignment' section has the 'Enable Stateless Address Auto-configuration (SLAAC)' checkbox checked. The interface name is 'wan' and the zone is 'WAN'. The 'Link-Local Address' is 'fe80::becf:4fff:fec9:9f04/64'. The 'IPv6 Address/Prefix Length' and 'Gateway' fields are optional and empty.

Lan

1. Create IPv6 DHCP DNS Server object. (Configuration > Object > DHCPv6 > Lease > Add)

The screenshot shows the 'Add corresponding' dialog box for creating a DHCPv6 lease. The Name is 'DNS_Server', Lease Type is 'DNS Server', Interface is 'lan1', DNS Server is 'User Defined', and User Defined Address is '2001:4860:4860::8888'. The 'OK' and 'Cancel' buttons are at the bottom.

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

2. Enable Interface and Enable IPv6.

Key in IPv6 Address/Prefix Length.

The screenshot shows the 'Edit Ethernet' configuration window. The 'Enable Interface' checkbox is checked. Under 'General IPv6 Setting', the 'Enable IPv6' checkbox is also checked. In the 'IPv6 Address Assignment' section, the 'IPv6 Address/Prefix Length' is set to '2001:b030:7036:5::/64'. The 'Link-Local Address' is 'fe80::becf:4fff:fec9:9f05/64'. The interface name is 'lan1' and the port is 'P3, P4, P5'. The zone is 'LAN1' and the MAC address is 'BC:CF:4F:C9:9F:05'. There are 'OK' and 'Cancel' buttons at the bottom right.

3. Assign IPv6 DNS Server into DHCPv6 Lease Options.

Enable Router Advertisement and enable Advertised Host Get Other Configuration From DHCPv6 checkboxes.

Key in Advertised Prefix Table.

The screenshot shows the 'DHCPv6 Setting' section with 'Server' selected in the dropdown. The 'DUID' is '00:03:00:01:BC:CF:4F:C9:9F:05'. Below this is the 'DHCPv6 Lease Options' table with one entry: 'DNS_Server' of type 'dns-server' with value '2001:4860:4860::88...'. The 'IPv6 Router Advertisement Setting' section has 'Enable Router Advertisement' checked, and 'Advertised Hosts Get Other Configuration From DHCPv6' checked. The 'Router Preference' is set to 'Medium'. At the bottom is the 'Advertised Prefix Table' with one entry: '2001:b030:7036:5::/64'.

#	Name	Type	Value
1	DNS_Server	dns-server	2001:4860:4860::88...

#	IPv6 Address/Prefix Length
1	2001:b030:7036:5::/64

Test Result

Test your IPv6 connection.

Summarize | **Test Results** | Share results / contact us | Other IPv6 websites | For help desk

- Your IPv4 address on the Internet 61.222.75.14
- Your IPv6 address on the Internet 2001:b030:7036:5:e98c:1d21:aaac:486d
- Your Internet Service Provider (ISP) is HINET Data Communication Business Group
- You have enabled IPv6. You can now view a tab to test the connection status of other IPv6 websites. [\[Detailed Information\]](#)
- The HTTPS support on this website is in Beta. [\[Detailed Information\]](#)
- Your DNS server (which may be maintained by your ISP) seems to support the IPv6 Internet protocol.

Your score for IPv6 preparation

10/10 When the website only uses IPv6 one after another, please prepare and set up your IPv6 in advance

[Click to view test data](#)

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Connection-specific DNS Suffix . : 
Description . . . . . : Intel(R) 82579LM Gigabit Network Connec
on
Physical Address. . . . . : 3C-97-0E-5E-C1-F8
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IPv6 Address. . . . . : 2001:b030:7036:5:199c:29c8:f93a:5578(Pr
ferred)
Temporary IPv6 Address. . . . . : 2001:b030:7036:5:e98c:1d21:aaac:486d(Pr
ferred)
Link-local IPv6 Address . . . . . : fe80::199c:29c8:f93a:5578%11(Preferred)
IPv4 Address. . . . . : 192.168.1.33(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : 2021?9?9? ?? 03:21:10
Lease Expires . . . . . : 2021?9?11? ?? 03:21:10
Default Gateway . . . . . : fe80::becf:4fff:fec9:9f05%11
                            192.168.1.1
DHCP Server . . . . . : 192.168.1.1
DHCP Client ID . . . . . : 000100500
```