

## Configuring the DHCPv6 Local Server

---

In addition to the embedded DHCP local server that is used for IP version 4 (IPv4) address support, E-series routers include an embedded DHCPv6 local server. This server enables the router to function as a server for the DHCP protocol for IP version 6 (IPv6). The DHCPv6 local server sends and receives packets via IPv6 and informs IPv6 of the routing requirements of the router clients.

The DHCPv6 local server provides the following IPv6 address support:

- Delegates IPv6 prefixes to client routers; each client can have one prefix; prefixes and DNS information can be locally configured or derived from RADIUS via AAA.
- Provides DNS server information to directly connected router clients.



**NOTE:** You must add a vendor-specific attribute to RADIUS to enable E-series routers to retrieve IPv6 Domain Name System (DNS) addresses.

---

Use the following steps to configure the DHCPv6 local server:

1. Enable the DHCPv6 local server.

```
host1(config)#service dhcpv6-local
```

2. Specify the IPv6 prefix and lifetime that are to be delegated to the DHCPv6 client. The specified prefix is delegated by the DHCPv6 local server when requested by the client.

```
host1(config-if)#ipv6 dhcpv6-local delegated-prefix 2001:db8:17::/48 lifetime infinite
```

Use the **lifetime** keyword to specify the time period for which the prefix is valid. This lifetime overrides the default lifetime that is set in Global Configuration mode. If no lifetime is specified, the default lifetime is assigned.

- Specify the number of days and, optionally, the number of hours, minutes, and seconds. You cannot specify a lifetime of zero (that is, you cannot set the days, hours, minutes, and seconds fields all to zero).
  - Use the keyword **infinite** to specify a lifetime that does not expire.
3. Specify the name of a DNS domain for DHCPv6 clients in the current virtual router to search. You can specify a maximum of four DNS domains for a DHCPv6 local server's search list.

```
host1(config-if)#ipv6 dhcpv6-local dns-domain-search xyzcorporation.com  
host1(config-if)#ipv6 dhcpv6-local dns-domain-search xyzcorp.com
```

4. Specify the IPv6 address of the DNS server and to assign the server to the DHCPv6 clients in the current virtual router. You can specify a maximum of four DNS servers.

```
host1(config-if)#ipv6 dhcpv6-local dns-server 2001:db8:18::
```

5. Set the default lifetime for which a prefix delegated by this DHCPv6 local server is valid. This default is overridden by an interface-specific lifetime.

host1(config-if)#**ipv6 dhcpv6-local prefix-lifetime infinite**

- Specify the number of days and, optionally, the number of hours, minutes, and seconds. You cannot specify a lifetime of zero (that is, you cannot set the days, hours, minutes, and seconds fields all to zero).
- Use the keyword **infinite** to specify a lifetime that does not expire.

**Related Topics**

- ip dhcp-local auth domain command
- service dhcpv6-local command
- ipv6 dhcpv6-local delegated-prefix command
- ipv6 dhcpv6-local dns-domain-search command
- ipv6 dhcpv6-local dns-server command
- ipv6 dhcpv6-local prefix-lifetime command