

Chapter 17

IPv6 Operational Mode Commands

Table 37 summarizes the command-line interface (CLI) commands you can use to monitor Internet Protocol version 6 (IPv6). In the table, the commands are grouped by functionality. In the remainder of this chapter, they are explained alphabetically.

Table 37: Commands for Monitoring IPv6

Task or Information to Monitor	Command
Display neighbor discovery information.	clear ipv6 neighbors on page 435
	clear ipv6 router-advertisement on page 436
	show ipv6 neighbors on page 436
	show ipv6 router-advertisement on page 437

clear ipv6 neighbors

Syntax	clear ipv6 neighbors <all host <i>host-name</i> >
Description	Clear IPv6 router advertisement counters.
Options	all—Clear IPv6 neighbors. host <i>host-name</i> —Clear the specified IPv6 neighbors.
Required Privilege Level	view
See Also	show ipv6 neighbors on page 436

clear ipv6 router-advertisement

Syntax clear ipv6 router-advertisement <interface *interface*> <logical-router *logical-router-name*>

Description Clear IPv6 router advertisement counters.

Options none—Clear IPv6 router advertisement counters for all interfaces.

interface *interface*—(Optional) Clear IPv6 router advertisement counters for the specified interface.

logical-router *logical-router-name*—(Optional) Name of a particular logical router on which the command operates.

Required Privilege Level view

See Also show ipv6 router-advertisement on page 437

show ipv6 neighbors

Syntax show ipv6 neighbors

Description Display information about the IPv6 neighbor cache.

Required Privilege Level view

Output Fields IPv6 Address—Name of IPv6 interface.

Linklayer Address—Link-layer address.

State—State of link. It can be up, down, incomplete, reachable, stale, or unreachable.

Exp—Number of seconds until entry expires.

Rtr—Whether the neighbor is a router. It can be yes or no.

Interface—Name of interface.

Sample Output

```
user@host> show ipv6 neighbors
IPv6 Address          Linklayer Address  State   Exp Rtr Interface
fe80::2a0:c9ff:fe5b:4c1e  00:a0:c9:5b:4c:1e reachable 15  yes fxp0.0
```

show ipv6 router-advertisement

Syntax	show ipv6 router-advertisement <conflicts> <interface <i>interface</i> ><prefix <i>prefix/prefix length</i> > <logical-router <i>logical-router-name</i> >
Description	Display information about IPv6 router advertisements. The output contains statistics about messages sent and received on interfaces, as well as information received from advertisements from other routers.
Options	<p>conflicts—Display only the IPv6 router advertisement information that is conflicting.</p> <p>interface <i>interface</i>—Display IPv6 router advertisement information for the specified interface.</p> <p>prefix <i>prefix/prefix length</i>—Display IPv6 router advertisement information for the specified prefix.</p> <p>logical-router <i>logical-router-name</i>—(Optional) Name of a particular logical router on which the command operates.</p>
Required Privilege Level	view
See Also	clear ipv6 router-advertisement on page 436
Output Fields	<p>Interface—Name of interface.</p> <p>Advertisements sent—Number of router advertisements sent and time since they were sent.</p> <p>Solicits received—Number of solicitation messages received.</p> <p>Advertisements received—Number of router advertisements received.</p> <p>Advertisements from—Names of interfaces from which router advertisements have been received and time since the last one was received.</p> <p>Managed—Managed address configuration flag. It can be 0 (stateless) or 1 (stateful).</p> <p>Other configuration—Other stateful configuration flag. It can be 0 (stateless) or 1 (stateful).</p> <p>Reachable time—The time that a node assumes a neighbor is reachable after receiving a reachability confirmation (in milliseconds).</p> <p>Default lifetime—Default lifetime (in seconds). It can be from 0 seconds to 18.2 hours. A setting of 0 indicates that the router is not a default router.</p> <p>Retransmit timer—The time between retransmitted Neighbor Solicitation messages (in milliseconds).</p> <p>Current hop limit—Configured current hop limit: from 1 through 255.</p> <p>Prefix—Name and length of prefix.</p>

Valid lifetime—How long the prefix remains valid for onlink determination. By default, the valid lifetime is set to 2,592,000 seconds. When 0xffffffff is specified, the valid lifetime is infinite. The valid lifetime is always greater than the preferred lifetime.

Preferred lifetime—How long the prefix generated by stateless autoconfiguration remains preferred. By default, the preferred lifetime is set to 604,800 seconds. When preferred lifetime is set to 0xffffffff, the preferred lifetime is infinite. The preferred lifetime is never greater than the valid lifetime.

On link—Onlink flag. It can be 0 (not onlink) or 1 (onlink). The default is 1.

Autonomous—Autonomous address configuration flag: 0 (not autonomous) or 1 (autonomous). The default is 1. The display identifies conflicting information by enclosing the value the router is advertising in brackets.

Sample Output: show ipv6 router-advertisement

```

user@host> show ipv6 router-advertisement
Interface: fe-0/1/1.0
  Advertisements sent: 0
  Solicits received: 0
  Advertisements received: 0
Interface: fxp0.0
  Advertisements sent: 0
  Solicits received: 0
  Advertisements received: 1
  Advertisement from fe80::2d0:b7ff:fe1e:7b0e, heard 00:00:13 ago
  Managed: 0
  Other configuration: 0 [1]
  Reachable time: 0 ms
  Default lifetime: 1800 sec
  Retransmit timer: 0 ms
  Current hop limit: 64
    
```

Sample Output: show ipv6 router-advertisement prefix

```

user@host> show ipv6 router-advertisement prefix 8040::/16
Interface: fe-0/1/3.0
  Advertisements sent: 3, last sent 00:04:11 ago
  Solicits received: 0
  Advertisements received: 3
  Advertisement from fe80::290:69ff:fe9a:5403, heard 00:00:05 ago
  Managed: 0
  Other configuration: 0
  Reachable time: 0 ms
  Default lifetime: 180 sec [1800 sec]
  Retransmit timer: 0 ms
  Current hop limit: 64
  Prefix: 8040:1::/64
  Valid lifetime: 2592000 sec
  Preferred lifetime: 604800 sec
  On link: 1
  Autonomous: 1
    
```

```
Sample Output: show user@host> show ipv6 router-advertisement conflicts
                 ipv6 Interface: fxp0.0
router-advertisement Advertisement from fe80::2d0:b7ff:fe1e:7b0e, heard 00:01:08 ago
conflicts             Other configuration: 0 [1]
```

```
Sample Output: show user@host> show ipv6 router-advertisement conflicts
                 ipv6
router-advertisement no
conflicts
```

