

NAME

rtadvd - router advertisement daemon

SYNOPSIS

rtadvd [-dDfRs] [-c *configfile*] [-C *ctlsock*] [-M *ifname*] [-p *pidfile*] [*interface ...*]

DESCRIPTION

rtadvd sends router advertisement packets to the specified *interfaces*. If no interfaces are specified, **rtadvd** will still run, but will not advertise any routes until interfaces are added using `rtadvctl(8)`.

The program will daemonize itself on invocation. It will then send router advertisement packets periodically, as well as in response to router solicitation messages sent by end hosts.

Router advertisements can be configured on a per-interface basis, as described in `rtadvd.conf(5)`.

If there is no configuration file entry for an interface, or if the configuration file does not exist altogether, **rtadvd** sets all the parameters to their default values. In particular, **rtadvd** reads all the interface routes from the routing table and advertises them as on-link prefixes.

rtadvd also watches the routing table. If an interface direct route is added on an advertising interface and no static prefixes are specified by the configuration file, **rtadvd** adds the corresponding prefix to its advertising list.

Similarly, when an interface direct route is deleted, **rtadvd** will start advertising the prefixes with zero valid and preferred lifetimes to help the receiving hosts switch to a new prefix when renumbering. Note, however, that the zero valid lifetime cannot invalidate the autoconfigured addresses at a receiving host immediately. According to the specification, the host will retain the address for a certain period, which will typically be two hours. The zero lifetimes rather intend to make the address deprecated, indicating that a new non-deprecated address should be used as the source address of a new connection. This behavior will last for two hours. Then **rtadvd** will completely remove the prefix from the advertising list, and succeeding advertisements will not contain the prefix information.

Moreover, if the status of an advertising interface changes, **rtadvd** will start or stop sending router advertisements according to the latest status.

The **-s** option may be used to disable this behavior; **rtadvd** will not watch the routing table and the whole functionality described above will be suppressed.

Basically, hosts **MUST NOT** send Router Advertisement messages at any time (RFC 4861, Section 6.2.3). However, it would sometimes be useful to allow hosts to advertise some parameters such as

prefix information and link MTU. Thus, **rtadvd** can be invoked if router lifetime is explicitly set zero on every advertising interface.

The command line options are:

- c** Specify an alternate location, *configfile*, for the configuration file. By default, */etc/rtadvd.conf* is used.
- C** Specify an alternate location for the control socket used by `rtadvctl(8)`. The default is */var/run/rtadvd.sock*.
- d** Print debugging information.
- D** Even more debugging information is printed.
- f** Foreground mode (useful when debugging). Log messages will be dumped to `stderr` when this option is specified.
- M** Specify an interface to join the all-routers site-local multicast group. By default, **rtadvd** tries to join the first advertising interface appearing on the command line. This option has meaning only with the **-R** option, which enables routing renumbering protocol support.
- p** Specify an alternative file in which to store the process ID. The default is */var/run/rtadvd.pid*.
- R** Accept router renumbering requests. If you enable it, certain IPsec setup is suggested for security reasons. This option is currently disabled, and is ignored by **rtadvd** with a warning message.
- s** Do not add or delete prefixes dynamically. Only statically configured prefixes, if any, will be advertised.

Use `SIGHUP` to reload the configuration file */etc/rtadvd.conf*. If an invalid parameter is found in the configuration file upon the reload, the entry will be ignored and the old configuration will be used.

When parameters in an existing entry are updated, **rtadvd** will send Router Advertisement messages with the old configuration but zero router lifetime to the interface first, and then start to send a new message.

Use `SIGTERM` to kill **rtadvd** gracefully. In this case, **rtadvd** will transmit router advertisement with router lifetime 0 to all the interfaces (in accordance with RFC 4861 6.2.5).

FILES

<code>/etc/rtadvd.conf</code>	The default configuration file.
<code>/var/run/rtadvd.pid</code>	The default process ID file.

EXIT STATUS

The **rtadvd** utility exits 0 on success, and >0 if an error occurs.

SEE ALSO

rtadvd.conf(5), rtadvctl(8), rtsol(8)

Thomas Narten, Erik Nordmark, W. A. Simpson, and Hesham Soliman, *Neighbor Discovery for IP version 6 (IPv6)*, RFC 4861.

Thomas Narten, Erik Nordmark, and W. A. Simpson, *Neighbor Discovery for IP version 6 (IPv6)*, RFC 2461 (obsoleted by RFC 4861).

Richard Draves, *Default Router Preferences and More-Specific Routes*, draft-ietf-ipngwg-router-selection-xx.txt.

J. Jeong, S. Park, L. Beloeil, and S. Madanapalli, *IPv6 Router Advertisement Options for DNS Configuration*, RFC 6106.

HISTORY

The **rtadvd** command first appeared in the WIDE Hydrangea IPv6 protocol stack kit.

BUGS

There used to be some text that recommended users not to let **rtadvd** advertise Router Advertisement messages on an upstream link to avoid undesirable icmp6(4) redirect messages. However, based on the later discussion in the IETF ipng working group, all routers should rather advertise the messages regardless of the network topology, in order to ensure reachability.