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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'udplite.7' command

\$ man udplite.7

UDPLITE(7) Linux Programmer's Manual UDPLITE(7)

NAME

udplite - Lightweight User Datagram Protocol

SYNOPSIS

```
#include <sys/socket.h>

sockfd = socket(AF_INET, SOCK_DGRAM, IPPROTO_UDPLITE);
```

DESCRIPTION

This is an implementation of the Lightweight User Datagram Protocol (UDP-Lite), as described in RFC 3828.

UDP-Lite is an extension of UDP (RFC 768) to support variable-length checksums. This has advantages for some types of multimedia transport that may be able to make use of slightly damaged datagrams, rather than having them discarded by lower-layer protocols.

The variable-length checksum coverage is set via a `setsockopt(2)` option. If this option is not set, the only difference from UDP is in using a different IP protocol identifier (IANA number 136).

The UDP-Lite implementation is a full extension of `udp(7)`; that is, it shares the same API and API behavior, and in addition offers two socket options to control the checksum coverage.

Address format

UDP-Litev4 uses the `sockaddr_in` address format described in `ip(7)`.

UDP-Litev6 uses the `sockaddr_in6` address format described in `ipv6(7)`.

Socket options

To set or get a UDP-Lite socket option, call `getsockopt(2)` to read or `setsockopt(2)` to write the option with the option level argument set to `IPPROTO_UDPLITE`. In addition, all `IPPROTO_UDP` socket options are valid on a UDP-Lite socket. See `udp(7)` for more information.

The following two options are specific to UDP-Lite.

UDPLITE_SEND_CSCOV

This option sets the sender checksum coverage and takes an `int` as argument, with a checksum coverage value in the range $0..2^{16}-1$.

A value of 0 means that the entire datagram is always covered. Values from 1-7 are illegal (RFC 3828, 3.1) and are rounded up to the minimum coverage of 8.

With regard to IPv6 jumbograms (RFC 2675), the UDP-Litev6 checksum coverage is limited to the first $2^{16}-1$ octets, as per RFC 3828, 3.5. Higher values are therefore silently truncated to $2^{16}-1$. If in doubt, the current coverage value can always be queried using `getsockopt(2)`.

UDPLITE_RECV_CSCOV

This is the receiver-side analogue and uses the same argument format and value range as `UDPLITE_SEND_CSCOV`. This option is not required to enable traffic with partial checksum coverage.

Its function is that of a traffic filter: when enabled, it instructs the kernel to drop all packets which have a coverage less than the specified coverage value.

When the value of `UDPLITE_RECV_CSCOV` exceeds the actual packet coverage, incoming packets are silently dropped, but may generate a warning message in the system log.

ERRORS

All errors documented for `udp(7)` may be returned. UDP-Lite does not add further errors.

FILES

`/proc/net/snmp`

Basic UDP-Litev4 statistics counters.

/proc/net/snmp6

Basic UDP-Litev6 statistics counters.

VERSIONS

UDP-Litev4/v6 first appeared in Linux 2.6.20.

BUGS

Where glibc support is missing, the following definitions are needed:

```
#define IPPROTO_UDPLITE 136
#define UDPLITE_SEND_CSCOV 10
#define UDPLITE_RECV_CSCOV 11
```

SEE ALSO

[ip\(7\)](#), [ipv6\(7\)](#), [socket\(7\)](#), [udp\(7\)](#)

RFC 3828 for the Lightweight User Datagram Protocol (UDP-Lite).

Documentation/networking/udplite.txt in the Linux kernel source tree

COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.

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