

NAME

dumynet - traffic shaper, bandwidth manager and delay emulator

DESCRIPTION

The **dumynet** system facility permits the control of traffic going through the various network interfaces, by applying bandwidth and queue size limitations, implementing different scheduling and queue management policies, and emulating delays and losses.

The user interface for **dumynet** is implemented by the `dnctl(8)` utility, so please refer to the `dnctl(8)` manpage for a complete description of the **dumynet** capabilities and how to use it.

Kernel Options

The following options in the kernel configuration file are related to **dumynet** operation:

IPFIREWALL	enable ipfirewall (if dumynet is to be used with ipfw)
IPFIREWALL_VERBOSE	enable firewall output
IPFIREWALL_VERBOSE_LIMIT	limit firewall output
DUMMYNET	enable dumynet operation
HZ	set the timer granularity

Generally, the following options are required:

```
options IPFIREWALL
options DUMMYNET
options HZ=1000          # strongly recommended
```

Additionally, one may want to increase the number of mbuf clusters (used to store network packets) according to the sum of the bandwidth-delay products and queue sizes of all configured pipes.

SEE ALSO

`setsockopt(2)`, `if_bridge(4)`, `ip(4)`, `ipfw(8)`, `dnctl(8)`, `pf.conf(5)`, `sysctl(8)`

HISTORY

The **dumynet** facility was initially implemented as a testing tool for TCP congestion control by Luigi Rizzo <luigi@iet.unipi.it>, as described on ACM Computer Communication Review, Jan.97 issue. Later it has been modified to work at the IP and bridging levels, integrated with the `ipfw(4)` packet filter, and extended to support multiple queueing and scheduling policies.