Rocky Enterprise Linux 9.2 Manual Pages on command 'tc-fq_codel.8'

$ man tc-fq_codel.8

FQ_CoDel(8)   Linux   FQ_CoDel(8)

NAME

    CoDel - Fair Queuing (FQ) with Controlled Delay (CoDel)

SYNOPSIS

    tc qdisc ... fq_codel [limit PACKETS] [flows NUMBER] [target TIME] [interval TIME]

    [quantum BYTES] [ecn | noecn] [ce_threshold TIME] [memory_limit BYTES]

DESCRIPTION

    FQ_Codel (Fair Queuing Controlled Delay) is queuing discipline that combines Fair Queuing

    with the CoDel AQM scheme. FQ_Codel uses a stochastic model to classify incoming packets

    into different flows and is used to provide a fair share of the bandwidth to all the flows

    using the queue. Each such flow is managed by the CoDel queuing discipline. Reordering

    within a flow is avoided since Codel internally uses a FIFO queue.

PARAMETERS

  limit

    has the same semantics as codel and is the hard limit on the real queue size.   When this

    limit is reached, incoming packets are dropped. Default is 10240 packets.

  memory_limit

    sets a limit on the total number of bytes that can be queued in this FQ-CoDel instance.

    The lower of the packet limit of the limit parameter and the memory limit will be en?

    forced. Default is 32 MB.

  flows

    is the number of flows into which the incoming packets are classified. Due to the stochas?

    tic nature of hashing, multiple flows may end up being hashed into the same slot. Newer

flows have priority over older ones. This parameter can be set only at load time since

memory has to be allocated for the hash table. Default value is 1024.

target

has the same semantics as codel and is the acceptable minimum standing/persistent queue

delay. This minimum delay is identified by tracking the local minimum queue delay that

packets experience. Default value is 5ms.

interval

has the same semantics as codel and is used to ensure that the measured minimum delay does

not become too stale. The minimum delay must be experienced in the last epoch of length

.B interval. It should be set on the order of the worst-case RTT through the bottleneck

to give endpoints sufficient time to react. Default value is 100ms.

quantum

is the number of bytes used as 'deficit' in the fair queuing algorithm. Default is set to

1514 bytes which corresponds to the Ethernet MTU plus the hardware header length of 14

bytes.

ecn | noecn

has the same semantics as codel and can be used to mark packets instead of dropping them.

If ecn has been enabled, noecn can be used to turn it off and vice-a-versa. Unlike codel,

ecn is turned on by default.

ce_threshold

sets a threshold above which all packets are marked with ECN Congestion Experienced. This

is useful for DCTCP-style congestion control algorithms that require marking at very shal?

low queueing thresholds.

EXAMPLES

#tc qdisc add   dev eth0 root fq_codel

#tc -s qdisc show

qdisc fq_codel 8002: dev eth0 root refcnt 2 limit 10240p flows 1024 quantum 1514

 target 5.0ms interval 100.0ms ecn

  Sent 428514 bytes 2269 pkt (dropped 0, overlimits 0 requeues 0)

  backlog 0b 0p requeues 0

   maxpacket 256 drop_overlimit 0 new_flow_count 0 ecn_mark 0

   new_flows_len 0 old_flows_len 0

#tc qdisc add dev eth0 root fq_codel limit 2000 target 3ms interval 40ms noecn

```
#tc -s qdisc show

qdisc  fq_codel  8003:  dev  eth0 root refcnt 2 limit 2000p flows 1024 quantum 1514 target
3.0ms interval 40.0ms
 Sent 2588985006 bytes 1783629 pkt (dropped 0, overlimits 0 requeues 34869)
 backlog 0b 0p requeues 34869
  maxpacket 65226 drop_overlimit 0 new_flow_count 73 ecn_mark 0
  new_flows_len 1 old_flows_len 3
```

SEE ALSO

tc(8), tc-codel(8), tc-red(8)

AUTHORS

FQ_CoDel was implemented by Eric Dumazet. This manpage was written by Vijay Subramanian.

Please report corrections to the Linux Networking mailing list <netdev@vger.kernel.org>.

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