Red Hat Enterprise Linux Release 9.2 Manual Pages on 'tc-sample.8' command

$ man tc-sample.8

Packet sample action in tc(8)   Linux   Packet sample action in tc(8)

NAME

sample - packet sampling tc action

SYNOPSIS

tc ... action sample rate RATE group GROUP [trunc SIZE] [index INDEX

]

tc ... action sample index INDEX

DESCRIPTION

The sample action allows sampling packets matching classifier.

The packets are chosen randomly according to the rate parameter, and

are sampled using the psample generic netlink channel. The user can

also specify packet truncation to save user-kernel traffic. Each sample

includes some informative metadata about the original packet, which is

sent using netlink attributes, alongside the original packet data.

The user can either specify the sample action parameters as presented

in the first form above, or use an existing sample action using its in?

dex, as presented in the second form.

SAMPLED PACKETS METADATA FIELDS

The metadata are delivered to userspace applications using the psample generic netlink channel, where each sample includes the following netlink attributes:

PSAMPLE_ATTR_IIFINDEX

The input interface index of the packet, if there is one.

PSAMPLE_ATTR_OIFINDEX

The output interface index of the packet. This field is not rel‐
evant on ingress sampling

PSAMPLE_ATTR_ORIGSIZE

The size of the original packet (before truncation)

PSAMPLE_ATTR_SAMPLE_GROUP

The psample group the packet was sent to

PSAMPLE_ATTR_GROUP_SEQ

A sequence number of the sampled packet. This number is incre‐
mented with each sampled packet of the current psample group

PSAMPLE_ATTR_SAMPLE_RATE

The rate the packet was sampled with

OPTIONS

rate RATE

The packet sample rate. RATE is the expected ratio between ob‐
served packets and sampled packets. For example, RATE of 100
will lead to an average of one sampled packet out of every 100
observed.

trunc SIZE

Upon set, defines the maximum size of the sampled packets, and

causes truncation if needed

group GROUP

The psample group the packet will be sent to. The psample module

defines the concept of groups, which allows the user to match

specific sampled packets in the case of multiple sampling rules,

thus identify only the packets that came from a specific rule.

index INDEX

Is a unique ID for an action. When creating new action instance,

this parameter allows one to set the new action index. When us?

ing existing action, this parameter allows one to specify the

existing action index. The index must 32bit unsigned integer

greater than zero.

EXAMPLES

Sample one of every 100 packets flowing into interface eth0 to psample

group 12:

    tc qdisc add dev eth0 handle ffff: ingress

    tc filter add dev eth0 parent ffff: matchall \

        action sample rate 100 group 12 index 19

Use the same action instance to sample eth1 too:

    tc qdisc add dev eth1 handle ffff: ingress

    tc filter add dev eth1 parent ffff: matchall \

        action sample index 19

SEE ALSO

tc(8), tc-matchall(8) psample(1)