NAME

cgroup – control group based traffic control filter

SYNOPSIS

tc filter ... **cgroup** [**match** *EMATCH_TREE*] [**action** *ACTION_SPEC*]

DESCRIPTION

This filter serves as a hint to **tc** that the assigned class ID of the net_cls control group the process the packet originates from belongs to should be used for classification. Obviously, it is useful for locally generated packets only.

OPTIONS

action *ACTION_SPEC*

Apply an action from the generic actions framework on matching packets.

match *EMATCH_TREE*

Match packets using the extended match infrastructure. See **tc-ematch**(8) for a detailed description of the allowed syntax in *EMATCH_TREE*.

EXAMPLES

In order to use this filter, a net_cls control group has to be created first and class as well as process ID(s) assigned to it. The following creates a net_cls cgroup named "foobar":

```
modprobe cls_cgroup
mkdir /sys/fs/cgroup/net_cls
mount -t cgroup -onet_cls net_cls /sys/fs/cgroup/net_cls
mkdir /sys/fs/cgroup/net_cls/foobar
```

To assign a class ID to the created cgroup, a file named *net_cls.classid* has to be created which contains the class ID to be assigned as a hexadecimal, 64bit wide number. The upper 32bits are reserved for the major handle, the remaining hold the minor. So a class ID of e.g. **ff:be** has to be written like so: **0xff00be** (leading zeroes may be omitted). To continue the above example, the following assigns class ID 1:2 to foobar cgroup:

```
echo 0x10002 > /sys/fs/cgroup/net_cls/foobar/net_cls.classid
```

Finally some PIDs can be assigned to the given cgroup:

```
echo 1234 > /sys/fs/cgroup/net_cls/foobar/tasks
echo 5678 > /sys/fs/cgroup/net_cls/foobar/tasks
```

Now by simply attaching a **cgroup** filter to a **qdisc** makes packets from PIDs 1234 and 5678 be pushed into class 1:2.

SEE ALSO

tc(8), **tc-ematch**(8),
the file *Documentation/cgroups/net_cls.txt* of the Linux kernel tree